Form 3160-3
(November 1983)
(formerly 9-331C)

CONFIDENTIAL

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
JUL 30 1990
DIVISION OF
OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.
USA Utah 56548

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

1a. TYPE OF WORK
DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME
N/A

b. TYPE OF WELL
OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [X] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME
Sorrel Butte

2. NAME OF OPERATOR
Nova Natural Resources Corp./Powell Exploration Co.

9. WELL NO.
#33-1

3. ADDRESS OF OPERATOR
1621 18th Street - Suite 470 - Denver CO 80202

10. FIELD AND POOL, OR WILDCAT
Wildcat 001

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
630' FSL & 680' FEL SESE
At proposed prod. zone

11. SEC., T., R., M., OR BLK AND SURVEY OR AREA
Sec. 33, T29S, R12E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
13 Miles Southeast of Hanksville, Utah

12. COUNTY OR PARISH
Wayne

13. STATE
Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
630'

16. NO. OF ACRES IN LEASE
1680

17. NO. OF ACRES ASSIGNED TO THIS WELL
160

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH
2400 TVD
~~4500 MD~~ WHRM

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
4690 GL

22. APPROX. DATE WORK WILL START*
Sept. 15, 1990

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
~~17½" 9 7/8"~~	~~13 3/8" 7 5/8"~~	~~48# 26.4#~~	~~300' 2450' MD~~	~~300 sxs or back to surface 200 sxs~~
4½"	6½"	10.5#	4500' MD	Slotted liner

Nova Natural Resources Corp./Powell Exploration Co. proposes to drill a well to 2400' TVD. If cores and test and logs justify, vertical well will be plugged back to 1750' and a horizontal well will be drilled with a 2000' lateral. If productive, a liner will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements.

See Onshore Order No.1 attached.

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Carl P. Lasher TITLE Consultant DATE July 26, 1990

(This space for Federal or State office use)

PERMIT NO. 43-055-30039 APPROVAL DATE

APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

OIL GAS & MINING

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 8-28-90
BY: John R. Baza
WELL SPACING: R615-3-2

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

WELL LOCATION AND ACREAGE DEDICATION PLAT

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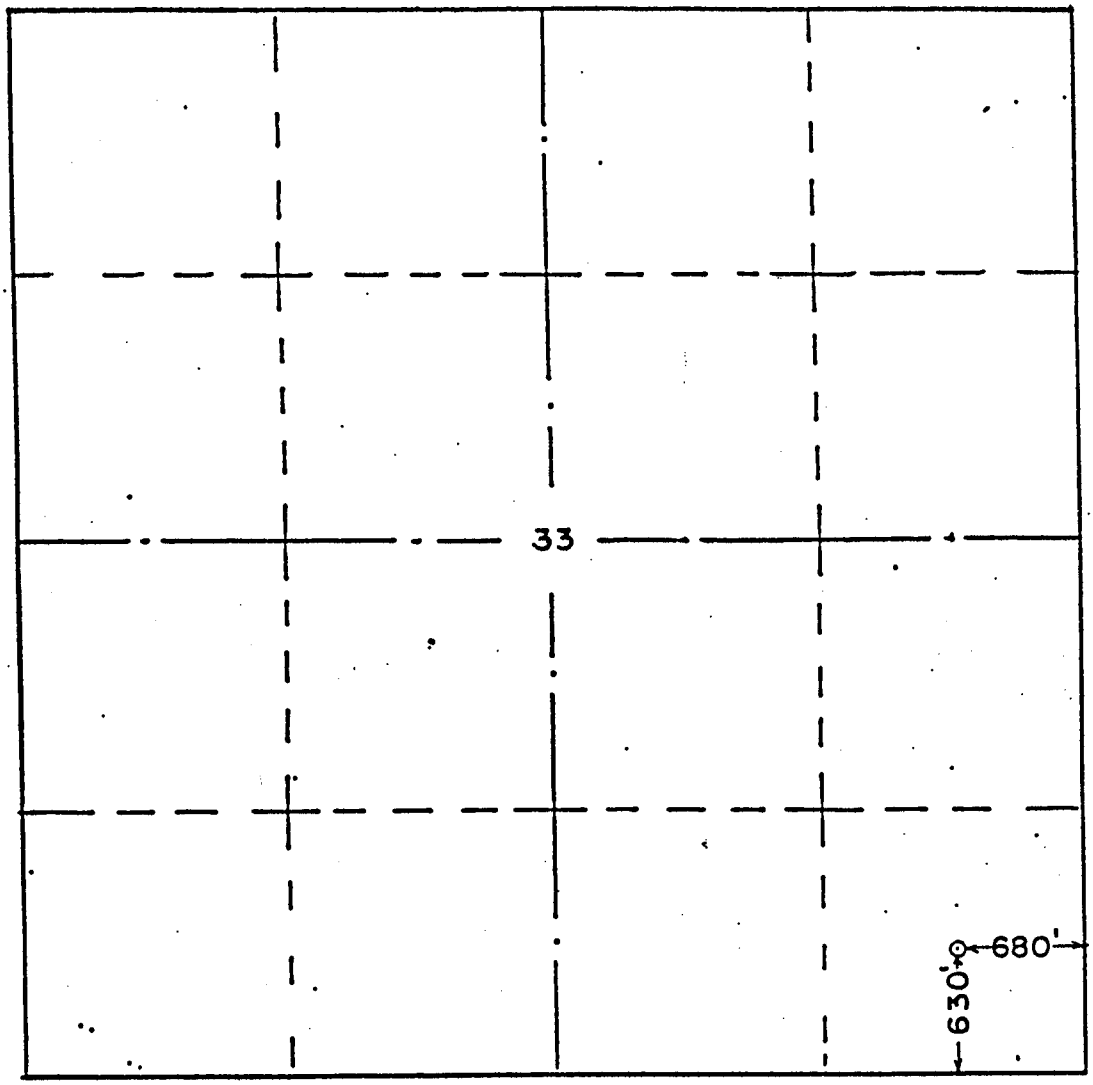

WELL LOCATION DESCRIPTION:
Nova Natural Resources, Sorrel Butte 33 - 1
630'FSL & 680'FEL
Section 33, T.29 N., R.12 W., NMPM
Wayne County, UT
4690' ground elevation

The above plat is true and correct to my knowledge and belief.

19 July 1990

Gerald G. Huddleston, LS

GERALD G. HUDDLESTON
17490
LAND SURVEYOR
STATE OF COLORADO

213 East Montezuma Avenue • Cortez, Colorado 81321 • 303-565-3330

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ONSHORE OIL AND GAS ORDER NO. 1

Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

SORREL BUTTE #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

Prepared For:

NOVA NATURAL RESOURCES CORP./ POWELL EXPLORATION CO.

By:

LESHER ENGINEERING
10390 West 34th Ave.
Wheat Ridge, Colorado 80033
(303) 238-5622

Copies Sent To:

4 - BLM Richfield, Utah
1 - Division of Oil, Gas & Mining, Salt Lake City, Utah
2 - Nova Natural Resources Corp., Denver, CO.
1 - Powell Exploration Co., Denver CO.
1 - Markham Oil and Gas Development, Lubbock, TX.
1 - John Byers Engineering, Lubbock, TX.
1 - Horizontal Recovery Specialists, Inc., Midland, TX

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

DRILLING PROGRAM

ONSHORE OIL AND GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

1. The estimated tops of important geologic markers are as follows:

Formation	Depth	Subsea
Entrada	Surface	+4690'
Carmel	163'	+4527'
Navajo	253'	+4437'
Kayenta	973'	+3717'
Wingate	1173'	+3517'
Chinle	1499'	+3191'
Moody Canyon	1843'	+2847'
Torrey	2041'	+2649'
Sinbad	2253'	+2437'
Black Canyon	2267'	+2423'
White Rim	2283'	+2407'
Total Depth	2400'	+2290'

2. The estimated depths at which water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Water	Entrada	100'
Oil	Torrey	2041'

No known mineral deposits are anticipated or will be penetrated.

3. Minimum specifications for pressure control equipment are as follows:
BOPE will be rated to a minimum of 2000 psi working pressure. Equipment will be tested prior to drilling out from under surface and operational checks will be made daily. Rams will be tested to rated working pressure or 70% of the minimum internal yield of the casing. BOPE will be tested prior to drilling out each casing shoe and at least every 30 days.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

DRILLING PROGRAM

4. Following is a description of the planned drilling program: 300' of 13 3/8" surface casing will be cemented back to surface in 17 1/2" hole. 9 7/8" hole will be drilled to core point of 2000'+ or -. 180' of core is to be cut. A drill stem test of potential hydrocarbons will be performed. The well will be drilled 100' into the White Rim Formation (TD) and logged. The well will be plugged back from 1850' to 1500'. The cement plug will be dressed off to 1725'. Hole will be directionally drilled with a build of 14 degrees/100' to achieve 90 degrees deviation at 2570' MD. Direction of kick-off will be provided from data derived from logs run in the vertical hole. 7 5/8" casing will be run to this depth. 6 1/2" hole will be drilled horizontally for 2000'. 4 1/2" slotted liner will be run and packed off inside the 7 5/8" intermediate casing. The well bore will remain within the required distance from lease lines.

A. The proposed casing program will be as follows:

Surface	300'	13 3/8"	48#	H-40	ST&C
Intermediate	2450' MD	7 5/8"	26.4#	J-55	LT&C
Production	Liner	4 1/2"	10.5#	J-55	LT&C

All casing strings will be tested to 0.2 psi/ft. or 1000 psi, whichever is greater prior to drilling out.

B. The cement program will be as follows:

Surface: 200 sxs of Lite cement followed by 100 sxs of Class G with 2% Calcium Chloride or amount sufficient to circulate to surface.

Intermediate: 100 sxs of Lite cement followed by 100 sxs of Class G or amount sufficient to bring cement back to 1600' MD.

Liner: Will be run to TD, hung and packed off approximately 300' up inside of the 7 5/8" casing.

C. Auxiliary equipment to be used is as follows:
   1. Kelly Cock
   2. A full opening valve will be on the floor to fit all pipe connections.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630 FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

DRILLING PROGRAM

5. A. The proposed circulating mediums to be employed in drilling are as follows:

Interval	Mud Type	Mud Wt.	Vis.	W.L.	pH
0-300'	Native	8.4-8.8	30	NC	NC
300-2400' VD	Polymer/gel	8.6-8.8	40	20	9.0
2150-4200' MD	Xanvis	8.4-8.5	34	NC	10.0

There will be sufficient mud on location to control a blowout should one occur.

B. Mud monitoring equipment to be used is as follows:
1. Visual monitoring will be done.

6. The anticipated type and amount of testing, logging and coring are as follows:
A. Drill stem test is possible in the Torrey Formation.
B. The logging program will consist of the following:
DIL/GR/SP - TVD to Surface.
LDT/CNL/GR/CAL - TVD through zones of interest.
FMS - TVD to 2000'
C. 180' of cores are anticipated in the Torrey Formation.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164.
Two copies of all logs, core descriptions, core analysis, well test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4.

7. A. Expected bottom hole pressure is 1050 psi obtained from offset well information.
B. No abnormal pressures, temperatures, or potential hazards such as Hydrogen Sulfide Gas are anticipated.

8. A. Nova Natural Resources Corp./Powell Exploration Co. proposes to spud Sorrel Butte #33-1 prior to October 1, 1990.
B. It is anticipated the duration of drilling will be 35 days.
C. The anticipated completion program is as follows:
1. Swab zone of interest and place on artificial lift.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne Count, Utah

DRILLING PROGRAM

D. No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the District Manager. A "Sundry Notices and Reports on Wells" (Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well or abandonment. This report will indicate where plugs were placed and the current status of surface operations.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

SURFACE USE PLAN

ONSHORE OIL AND GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

1. Existing Roads

A. Directions to the location from Hanksville, Utah are as follows:

Go South on State Highway 95 for 10 miles and turn East on the well maintained road for 2.6 miles. Turn right on a well maintained road for .5 mile to location.

B. All existing roads within a 2-mile radius are shown on Map #1.

C. Existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

2. Access Roads to be Constructed and Reconstructed

A. No new roads will be constructed for access to the location.

B. All access roads to the location are maintained by the State or County.

3. Location of Existing Wells Within a 1-Mile Radius of the Proposed Location. See Map #2.

A. Water Wells - none
B. Injection or Disposal Wells - none
C. Producing Wells - none
D. Drilling Wells - none

4. Location of Existing and/or Proposed Facilities if the Well is Productive.

A. Production facilities (including dikes) will be located on the cut portion of the location and a minimum of 10 feet from the toe of the back cut.

B. All flowlines from the well site to battery site will be buried below frost line depth.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

SURFACE USE PLAN

4. Production Facilities (cont.)

C. A dike will be constructed completely around the production facilities (i.e. production tanks, water tanks, and/or heater-treater). The dikes for the production facilities will be constructed of compacted subsoil, hold the capacity of the largest tank, and be independent of the back cut. Any production pits will be fenced with at least 4 strands of barbed wire and held in place by side posts and corner H-braces.

D. All permanent above the ground structures, tank batteries, etc., that will remain longer than six months will be painted a color determined by the BLM. the exception being that Utah Occupation Health and Safety Act Rules and Regulations are to be complied with where special safety colors are required.

E. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic.

F. Any necessary pits will be fenced to prevent wildlife entry.

G. Produced waste water will be confined to an unlined pit for a period not to exceed 90 days after initial production. During that 90 day period, an application for approval of a permanent disposal method and location (NTL-2B), along with the required water analysis will be submitted.

F. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.

5. Location and Type of Water Supply

A. The source of water will be from private wells located in Sec. 36, T29S, R11E and in Sec. 26, T30S, R11E and from irrigation ditches in Hanksville.

B. No water wells are to be drilled. Should a water well be required, approval via Sundry Notice will be obtained prior to drilling.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

SURFACE USE PLAN

6. Construction Materials

A. Surface and subsoil material in the immediate area will be utilized.

B. No construction materials will be removed from Federal lands.

C. Gravel, stone and sand will be purchased from a commercial source.

D. Any materials to be used which are under BLM jurisdiction shall be approved in advance, as per CFR 3610.2-3.

7. Methods for Handling Waste Disposal

A. Drill cuttings are to contained and buried in the reserve pit.

B. All wastes that accumulate during the drilling operations will be contained in a portable cage and removed from the location and deposited in an approved sanitary landfill. Immediately after removal of the drill rig, all garbage and debris on the site will be removed from the site.

C. Any salts and chemical which are an integral part of the drilling system will be disposed of in the same manner as the drilling fluid.

D. A chemical porta-toilet will be furnished with the drilling rig.

E. The produced fluids will be produced into a test tank until such time as construction of production facilities are completed. Any spills of oil, salt water or other produced fluids will be cleaned up and removed.

F. The reserve pit and drilling fluids contained in the pit will be allowed to dry. The pit will then be backfilled.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

SURFACE USE PLAN

7. Handling Waste Disposal (cont.)

G. All pits containing liquids will be fenced with 4 strands of barbed wire and held in place by side posts and corner H-braces.

8. Ancillary Facilities

A. No camps, airstrips or other facilities will be necessary.

B. If a camp becomes necessary, approval via Sundry Notice will be obtained before a camp is constructed for this location or any living quarter other than those specified in the approved APD are moved onto the location.

9. Wellsite Layouts

A. The rig layout is shown on Diagram #1.

B. A cross section of the well pad is shown on Diagram #2. Cuts and fills are shown on Diagram #3.

C. The location of reserve pit, trash pit, access onto the pad, turn around areas, living facilities, soil material stockpiles and orientation of the rig with respect to the pad and other facilities is shown on Diagrams #1 and #3.

D. The reserve pit will not be lined unless porous material is encountered. The reserve pit will be designed to prevent the collection of surface runoff.

E. The reserve pit will be constructed with a minimum of one-half the total depth below the original ground surface on the lowest point within the pit. Steel mud pits will be used during drilling operations.

F. The reserve pit will be fenced on three sides during drilling and the fourth side will be fenced at the time the rig is removed.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./ Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Wayne County, Utah

SURFACE USE PLAN

9. WellSite (cont.)

G. The top 6" of soil from the location including areas of cut and fill will be stockpiled at the site.

H. If there is snow on the ground when construction begins, the operator will remove it before the soil is disturbed, and pile it downhill from the topsoil stockpile location.

I. If ground frost prevents the segregation and removal of the topsoil material from the less desirable subsoil material, cross-ripping to the depth of the topsoil material may be necessary.

J. All soil material disturbed will be placed in an area where it can be retrieved.

K. The cutslope will be constructed no steeper than 2:1. The fillslope will be constructed no steeper than 2:1.

10. Plans for Reclamation of the Surface

The following surface reclamation will be done upon completion of the operations.

A. The reserve pit will be backfilled when dry, all cut and fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be recontoured to resemble the original contours of the surrounding terrain, topsoil redistributed and reseeded with the following seed mixture, in pound of Pure Live Seed per Acre.

Crested Wheat Grass	12.0 lbs/acre
Forage Kochia	3.0 lbs/acre

B. The operator will broadcast the seed and cover lightly to prevent seed loss. To maintain quality and purity, certified seed with a minimum germination rate of 80% and a minimum purity of 90% will be used.

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Onshore Oil and Gas Order #1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Wayne County, Utah

SURFACE USE PLAN

10. Reclamation of Surface (cont.)

C. Topsoil and subsoil will be segregated and stockpiled near the location.

D. During reclamation of the site, the operator will push fill material into the cuts and up over the backslope to approximate the original topography. No depressions will be left that trap water or form ponds.

E. Waste material will be disposed of as stated in #7 of this Surface Use Plan.

F. Before the location has been reshaped and prior to redistributing the topsoil, the operator will scarify the pad on the contour, to a depth of at least 12". The rippers are to be no further than 24" apart.

G. The topsoil will be evenly distributed over the entire location and the seed bed prepared by disking to a depth of 4 to 6 inches following the contours.

H. Fall seeding will be completed after September and prior to ground frost.

I. All rehabilitation work, including seeding, will be completed by 11/15/91.

11. Surface Ownership

Wellsite - Bureau of Land Management

Roads - Road are owned by the Bureau of Land Management and maintained by the County.

12. Other Information

A. A Class III survey was conducted on this location by Bill Davis of ABAJO ARCHEOLOGY. No significant cultural resources were found. Copies of the report will be sent to the appropriate agencies by Mr. Davis.

B. If any cultural values are observed during construction and operations, they will be left intact and the Area Manager in Richfield, Utah will be notified.

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Onshore Oil and Gas Order No. 1
Nova Natural Resources Corp./Powell Exploration Co.
Sorrel Butte #33-1
630' FSL and 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

SURFACE USE PLAN

12. Other Information (cont.)

C. "Sundry Notice and Report of Wells"n (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 32 CFR 3164.

D. The dirt contractor will be provided with an approved copy of the surface use plan.

13. Lessee's or Operator's Representative and Certification

PERMIT MATTERS

LESHER ENGINEERING

Carl L. Lesher
10390 W34th Ave.
Wheat Ridge, CO 80033
303-238-5622

DRILLING & COMPLETION MATTERS

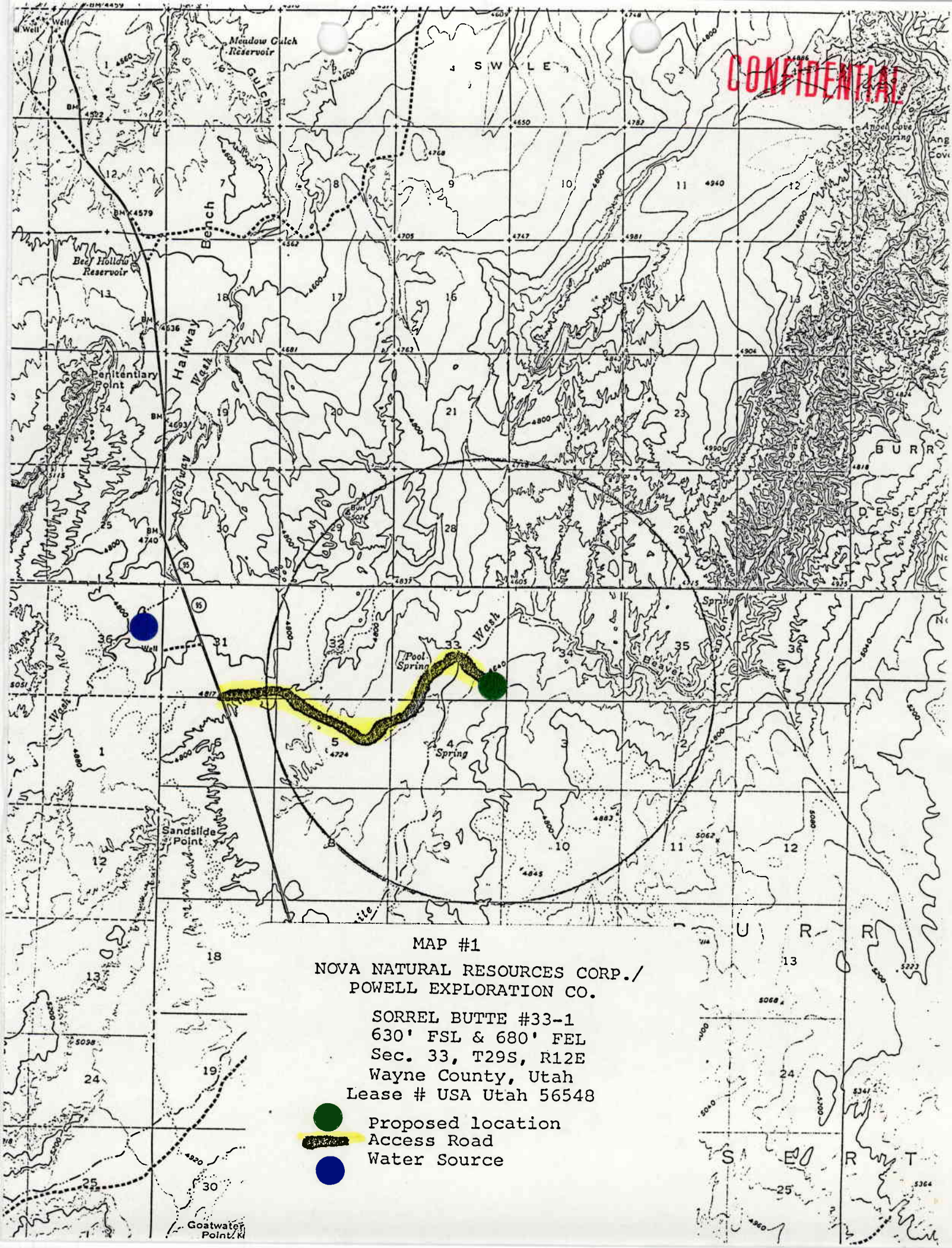
NOVA NATURAL RESOURCES CORP./
POWELL EXPLORATION CO.
Brian Spillane
1621 18th Street - Suite 470
Denver, CO 80202
303-293-2902

CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Nova Natural Resources Corp./Powell Exploration Co. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

July 26, 1990
Date:

Carl L. Lesher
LESHER ENGINEERING
Consultant for:
Nova Natural Resources Corp./
Powell Exploration Co.



MAP #1

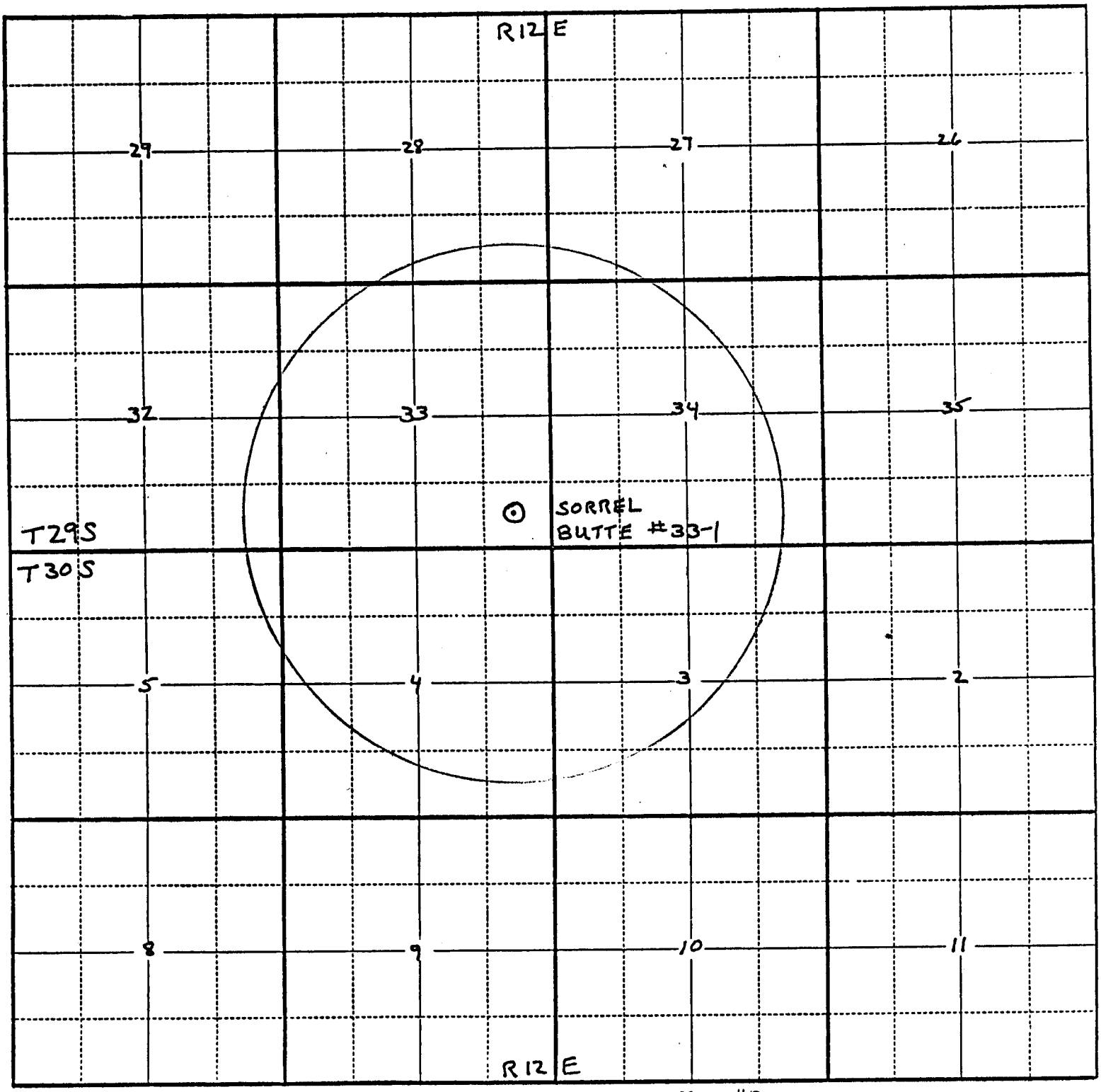
NOVA NATURAL RESOURCES CORP./
POWELL EXPLORATION CO.

SORREL BUTTE #33-1
630' FSL & 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah
Lease # USA Utah 56548

Proposed location
Access Road
Water Source

CONFIDENTIAL

Township 29+30S Range 12E County WAYNE State UTAH



Map #2
Nova Natural Resources Corp./
Powell Exploration Co.
Sorrel Butte #33-1
630' FSL & 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

Scale: 1" = 50'

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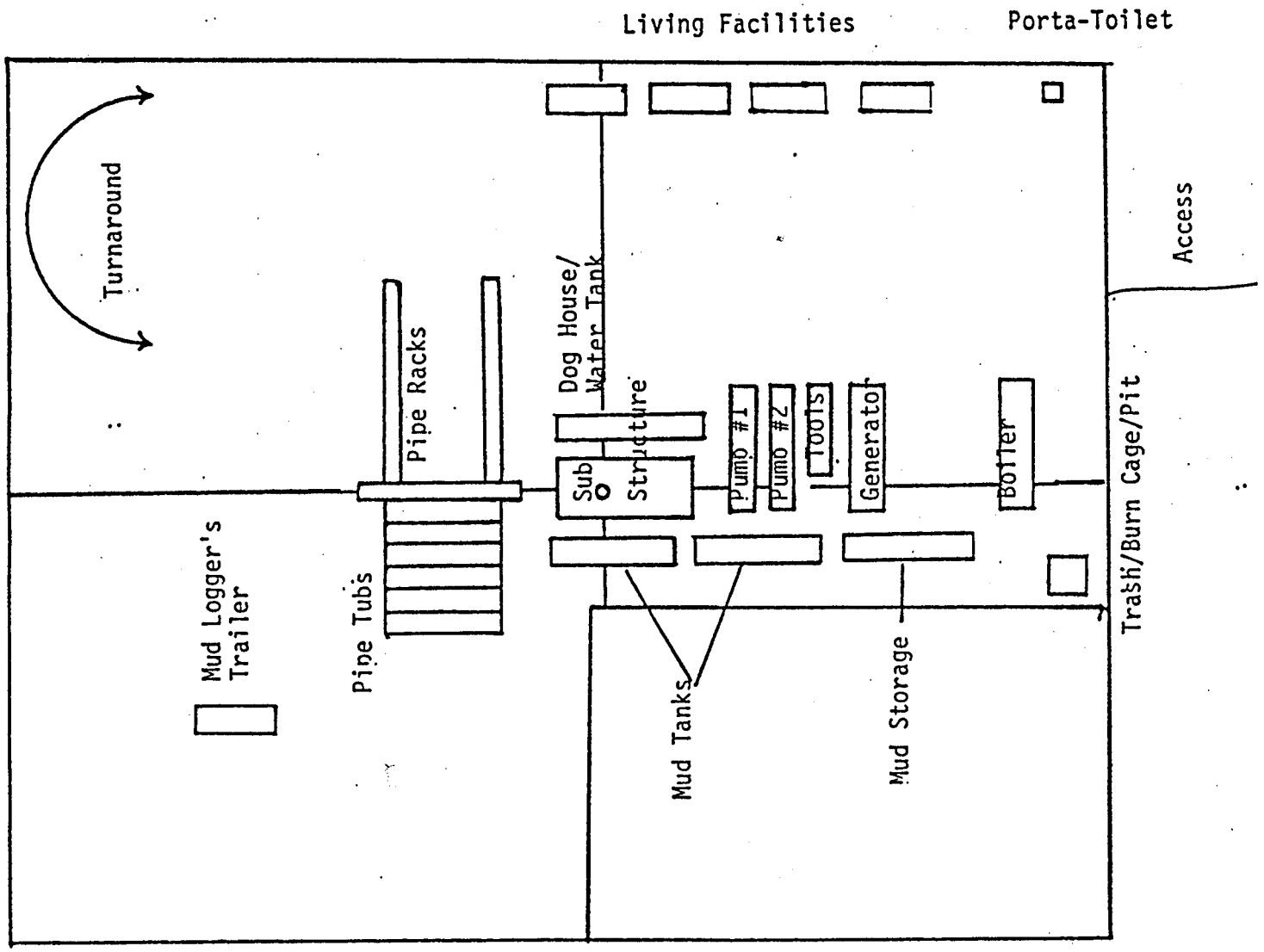


DIAGRAM #1

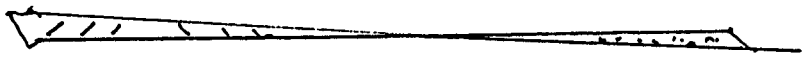
Nova Natural Resources Corp./
Powell Exploration Co.
Sorrel Butte #33-1
630' FSL & 680' FEL
Sec. 33, T29S, R12E
Wayne County, Utah

DIAGRAM #2
Cross Section

CONFIDENTIAL
Sorrel Butte 33 - 1

Cut ////
Fill

1"=50' Horz. & Vert.

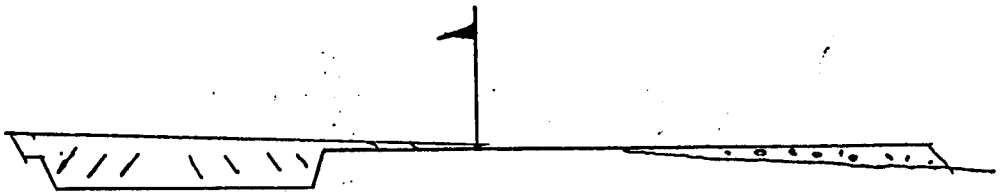


c

c'

Cut : ± 3800 cy pad
± 3000 cy pit (below pad)

Fill : ≠ 2800 cy pad



b

b'

a

a'

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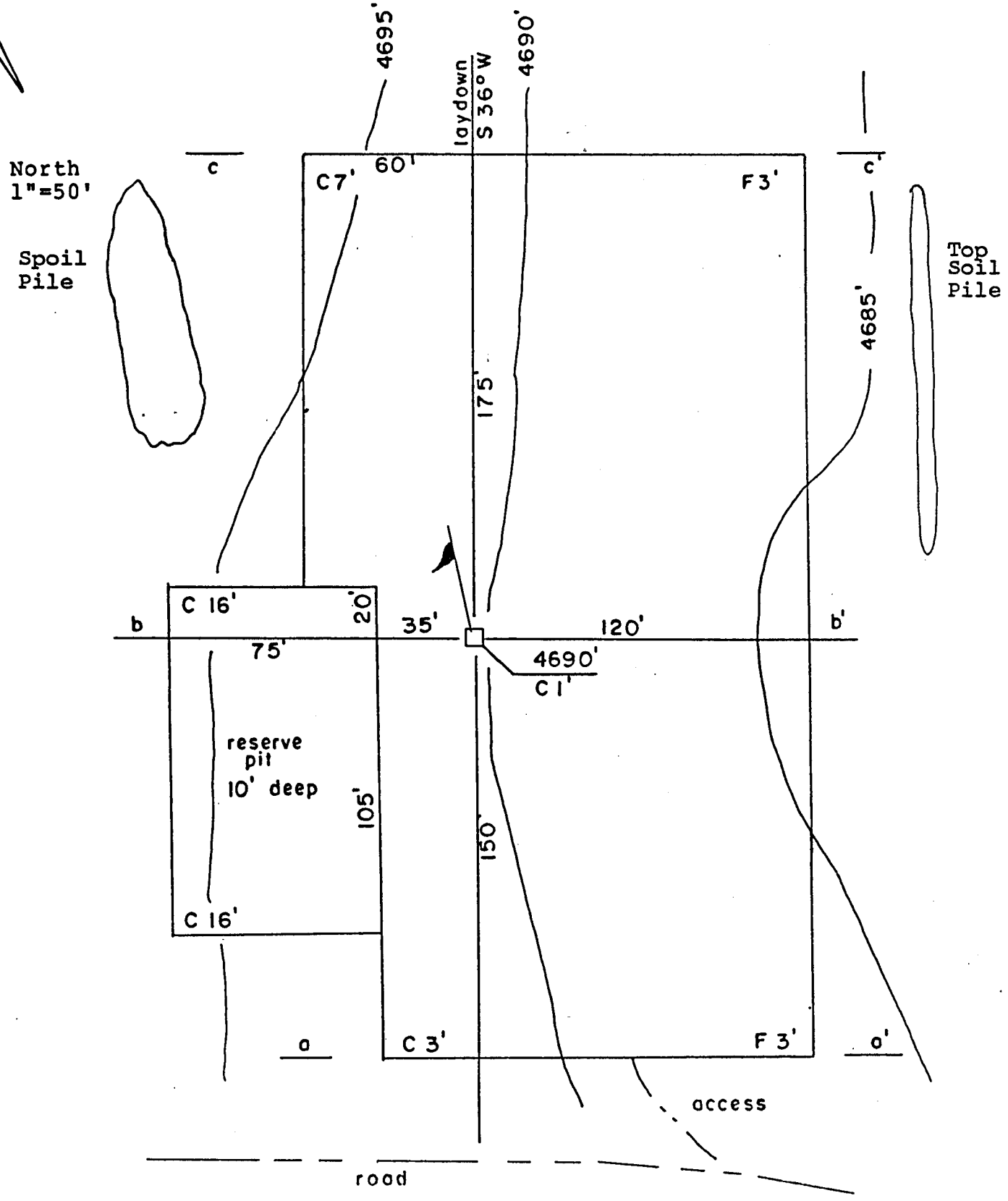
DIAGRAM #3

Plan View Sketch

Sorrel Butte 33 - 1



NOVA NATURAL RESOURCES CORPORATION

July 27, 1990

Bureau of Land Management
150 E. 900 N.
Richfield, UT 84701

RE: Lesher Engineering

Gentlemen:

This letter is to inform you that Lesher Engineering is authorized to act as Agent and to sign documents on behalf of Nova Natural Resources Corporation/Powell Exploration Company when necessary for filing County, State, and Federal permits including Onshore Order No. 1, Right-of-Way applications, etc., for all Nova operated wells in the Richfield District.

Nova Natural Resources Corporation/Powell Exploration Company agrees to accept full responsibility for operations conducted in order to drill, complete, and produce the above captioned well.

Yours truly,

NOVA NATURAL RESOURCES CORPORATION

Brian B. Spillane
President

1621-18TH STREET, SUITE 470 • DENVER, COLORADO 80202 • 303-293-2902 • Mailing Address: P.O. BOX 17428 • DENVER, COLORADO 80217

CONFIDENTIAL

OPERATOR Nola Natural Res. Corp. DATE 8-2-90

WELL NAME Soul Butte 33-1

SEC SESE 33 T 29S R 10E COUNTY Wayne

43-055-30039
API NUMBER

Federal (1)
TYPE OF LEASE

CHECK OFF:

[ ] PLAT [ ] BOND [ ] NEAREST WELL

[ ] LEASE [ ] FIELD [ ] POTASH OR OIL SHALE

PROCESSING COMMENTS:
No well within Sec 33
ROCC 8-3-90
Water Permit

APPROVAL LETTER:

SPACING: [ ] R615-2-3 N/A UNIT [ ] R615-3-2

[ ] N/A CAUSE NO. & DATE [ ] R615-3-3

STIPULATIONS:
1- Needs water Permit

CONFIDENTIAL PERIOD EXPIRED ON 10-28-90

0218T

STATE ACTIONS

Mail to:
RDCC Coordinator
116 State Capitol
Salt Lake City, Utah 84114

1. ADMINISTERING STATE AGENCY
OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

2. STATE APPLICATION IDENTIFIER NUMBER:
(assigned by State Clearinghouse)

3. APPROXIMATE DATE PROJECT WILL START:
September 15, 1990

4. AREAWIDE CLEARING HOUSE(s) RECEIVING STATE ACTIONS:
(to be sent out by agency in block 1)
Six County Commissioners Organization

5. TYPE OF ACTION: /_/ Lease /X/ Permit /_/ License /_/ Land Acquisition
/_/ Land Sale /_/ Land Exchange /_/ Other _____

6. TITLE OF PROPOSED ACTION:
Application for Permit to Drill

7. DESCRIPTION:
Nova Natural Resources Corporation/Powell Exploration Company proposes to drill a wildcat well, the Sorrel Butte #33-1, on a federal lease number U-56548 in Wayne County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The U.S Bureau of Land Management is the primary administrative agency in this case and must issue approval to drill before operations can commence.

8. LAND AFFECTED (site location map required) (indicate county)
SE/4, SE/4, Section 33, Township 29 South, Range 12 East, Wayne County, Utah

9. HAS THE LOCAL GOVERNMENT(s) BEEN CONTACTED?
Unknown

10. POSSIBLE SIGNIFICANT IMPACTS LIKELY TO OCCUR:
No significant impacts are likely to occur

11. NAME AND PHONE NUMBER OF DISTRICT REPRESENTATIVE FROM YOUR AGENCY NEAR PROJECT SITE, IF APPLICABLE:

12. FOR FURTHER INFORMATION, CONTACT:
John Baza
PHONE: 538-5340

13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL
John R. Baza
DATE: 8-3-90 Petroleum Engineer

WOI187

Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

August 28, 1990

Nova Natural Resources Corporation
1621 18th Street, Suite 470
Denver, Colorado 80202

Gentlemen:

Re: Sorrel Butte 33-1 - SE SE Sec. 33, T. 29S, R. 12E - Wayne County, Utah
630' FSL, 680' FEL

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-2, Oil and Gas Conservation General Rules, subject to the following stipulation:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification within 24 hours after drilling operations commence.
2. Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.
3. Submittal of the Report of Water Encountered During Drilling, Form 7.
4. Prompt notification if it is necessary to plug and abandon the well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or Jim Thompson, Lead Inspector, (Home) 298-9318.
5. Compliance with the requirements of Rule R615-3-20, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

6. Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 538-6121.

7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-055-30039.

Sincerely,

R. J. Firth
Associate Director, Oil & Gas

tas
Enclosures
cc: Bureau of Land Management
J. L. Thompson
WE14/1-8

CONFIDENTIAL

LESHER
ENGINEERING

PETROLEUM
CONSULTING

10390 W. 34th Avenue
Wheat Ridge, Colorado 80033
(303) 238-5622

December 12, 1990

Bureau of Land Management
150 East 900 North
Richfield, Utah 84701

Dear Sir:

Enclosed is Form 3160-5 in triplicate requesting approval for a change of plan for the Approved Well in the SESE of Sec.33, T29S, R12E Wayne County, Utah.

These changes were discussed with Michael Jackson of your office.

If you require additional information, please contact me at the above address and phone number.

Sincerely,

Carl L. Lesher

Carl L. Lesher
LESHER ENGINEERING

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
DEC 17 1990
DIVISION OF
OIL, GAS & MINING

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Nova Natural Resources Corp./Powell Exploration Co.

3. Address and Telephone No.
1621 18th Street - Suite 470 - Denver, CO 80202

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
630' FSL & 680' FEL
Sec. 33, T29S, R12E
43-055-30039

5. Lease Designation and Serial No.
USA Utah 56548

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA, Agreement Designation
N/A

8. Well Name and No.
Sorrel Butte

9. API Well No.
#33-1

10. Field and Pool, or Exploratory Area
Wildcat

11. County or Parish, State
Wayne, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☒ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Nova Natural Resources Corp. requests approval on a Change Of Plans on approved APD for the above well.
Size of surface hole - 8 3/4", surface casing - 7" 17#, J-55 new casing set at 300'. Casing will be cemented with 75 sxs or sufficient amount to bring cement back to surface.
The BOP arangement and pressure rating will remain the same with the addition of a rotating head on top of the BOP. This is to allow drilling with air, air mist, aereated mud, or an underbalanced mud system to prevent damage to the formation.
The well is planned to be spudded the first part of January 1991.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 12-20-90
BY: [signature]

14. I hereby certify that the foregoing is true and correct
Signed Carl L. Lesher Title Consultant Date Dec. 12, 1990

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

RECEIVED
JAN 04 1991
DIVISION OF
OIL, GAS & MINING

SUBMIT IN TRIPLICATE

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Nova Natural Resources Corp./Powell Exploration Co.

3. Address and Telephone No.
1621 18th Street - Suite 470 - Denver, CO. 80202

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
630' FSL & 680' FEL
Sec. 33, T29S, R12E
43-055-30039

5. Lease Designation and Serial No.
USA Utah 56548

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA, Agreement Designation
N/A

8. Well Name and No.
Sorrel Butte

9. API Well No.
#33-1

10. Field and Pool, or Exploratory Area
Wildcat

11. County or Parish, State
Wayne, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☒ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Nova Natural Resources Corp. proposes to drill a 6¼" hole out from under the 7" surface casing set at 300' to proposed total depth of 2400'.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 1-9-91
BY: [signature]

14. I hereby certify that the foregoing is true and correct
Signed Carol P. Lester Title Consultant Date Jan. 1, 1991

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

DIVISION OF OIL, GAS AND MINING

API NO. 43-055-30039

SPUDDING INFORMATION

NAME OF COMPANY: NOVA NATURAL RESOURCES CORPORATION

WELL NAME: SORREL BUTTE 33-1

SECTION SESE 33 TOWNSHIP 29S RANGE 12E COUNTY WAYNE

DRILLING CONTRACTOR BEEMAN DRILLING

RIG # ?

SPUDDED: DATE 1-24-91

TIME 1:30 p.m.

HOW ROTARY

CONFIDENTIAL

DRILLING WILL COMMENCE _____

REPORTED BY CARL LESHER

TELEPHONE # _____

DATE 1-28-91 SIGNED TAS

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
JAN 28 1991
DIVISION OF OIL, GAS & MINING

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.
USA Utah 56548

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA, Agreement Designation
N/A

SUBMIT IN TRIPLICATE

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
Sorrel Butte

2. Name of Operator
Nova Natural Resources Corp./ Powell Exploration Co.

9. API Well No.
#33-1

3. Address and Telephone No.
1621 18th Street - Suite 470 - Denver, CO 80202

10. Field and Pool, or Exploratory Area
Wildcat

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
630' FSL & 680' FEL
Sec. 33, T29S, R12E
43-055-30029

11. County or Parish, State
Wayne, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[X] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other _____	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Nova Natural Resources Corp. requests approval on a Change of Plan.
Well location is to be moved 50' due south of staked location. New location is to be 680' FSL &680' FEL of Sec. 33, T29S, R12E.
Size of surface hole - 12 1/4" - 8 5/8", 24#, J-55 surface casing set at 300'. Casing will be cemented with 110 sxs or sufficient amount to bring cement back to surface.
6 1/2" hole will be drilled below the surface casing to total depth. If problems occur, the hole may be reamed to 7 7/8" and continued to TD.

Verbal approval has been received from BLM Richfield, Utah.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS AND MINING
DATE: 2-7-91
BY: [signature]

14. I hereby certify that the foregoing is true and correct
Signed Carl R. Lester Title Consultant Date Jan. 23, 1991

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
FEB 11 1991
DIVISION OF
OIL, GAS & MINING

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: USA Utah 56548

6. If Indian, Allottee or Tribe Name: N/A

7. If Unit or CA, Agreement Designation: N/A

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.: Sorrel Butte

2. Name of Operator: Nova Natural Resources Corp./Powell Exploration Co.

9. API Well No.: #33-1

3. Address and Telephone No.: 1900 Wazee Street - Suite 305 - Denver, CO 80202

10. Field and Pool, or Exploratory Area: Wildcat

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
580' FSL &680' FEL
Sec. 33, T29S, R12E
43-055-30039

11. County or Parish, State: Wayne, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[X] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

CONFIDENTIAL

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Nova Natural Resources Corp. requests approval to suspend operations on above well. 8 5/8", 20# new casing was set at 318' and cemented back to surface. Due to cold weather, a request operations be suspended for 45 to 60 days is made at this time. A cap will be placed on top of the surface casing.

Please note the correction of the surface location as being 580' FSL also please note the change of address of Nova Natural Resources Corp. to 1900 Wazee Street - Suite 305 - Denver, CO. 80202.

Oral approval was received from BLM Richfield, Utah

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 2-22-91

BY: [signature]

14. I hereby certify that the foregoing is true and correct

Signed Carl R. Precht Title Consultant Date Feb. 7, 1991

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

April 5, 1991

Nova Natural Resources Corp.
1900 Wazee Street, Suite 305
Denver, Colorado 80202

Gentlemen:

conf. ltr

Re: Request for Completed Entity Action Form
Sorrel Butte 33-1 - SESE Sec. 33, T. 29S, R. 12E - Wayne County, Utah

This is written to remind you that all well operators are responsible for sending an Entity Action Form to the Division of Oil, Gas and Mining within five working days of spudding a new well. This office was notified that your company spudded the Sorrel Butte 33-1, API Number 43-055-30039, on January 24, 1991. At this time, we have not received an Entity Action Form for this well.

Please review the instructions on the back of the enclosed form. Make sure you choose the proper Action Code to show whether the well will be a single well with its own sales facilities (Code A), a well being added to an existing group of wells having the same tank battery and common division of royalty interest (Code B - show existing Entity Number to which well should be added), or a well being drilled in the participating area of a properly designated unit (Code B). Complete the form and return it to us by April 17, 1991.

Your attention to this matter is appreciated. If we can be of assistance to you, please feel free to call Lisha Romero at the above number.

Sincerely,

Don Staley

Don Staley
Administrative Supervisor

lcr
Enclosure
cc: R. J. Firth
File
WE66/8

CONFIDENTIAL

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

RECEIVED
APR 10 1991
DIVISION OF
OIL GAS & MINING

SUBMIT IN TRIPLICATE

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Nova Natural Resources Corp./Powell Exploration Co.

3. Address and Telephone No.
1900 Wazee Street - Suite 305 - Denver, CO 80202

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
580' FSL & 680' FEL
Sec. 33. T29S, R12E

5. Lease Designation and Serial No.
USA Utah 56548

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA, Agreement Designation
N/A

8. Well Name and No.
Sorrel Butte

9. API Well No.
#33-1 43-055-30039

10. Field and Pool, or Exploratory Area
Wildcat

11. County or Parish, State
Wayne, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☒ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Nova Natural Resources requests permission to Plug & Abandon the above well. TD - 2406' drillers. Formation tops - sample - Navajo - 240', Kayenta - 950', Wingate - 1180', Chinle - 1484', Mossback - 1750', Moenkopi - 1850', Sinbad - 2240', White Rim - 2280'. Surface casing at 318'. Plug #1 - 2200' - 2300' (100'), Plug #2 - 1450' - 1550' (100'), Plug #3 - 850' - 1050' (200') will tag, Plug #4 218' - 418' (200') across surface casing and will tag. Plug #5 - surface - 50' (40').

Cement plugs will be spotted by displacement through drill pipe.

Verbal approval received from R. A. McKee BLM 3-27-91.

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 4/16/91
BY:

14. I hereby certify that the foregoing is true and correct
Signed Carl L. Pasker Title Consultant Date April 5, 1991

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-4
(November 1983)
(formerly 9-330)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

CONFIDENTIAL

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: USA Utah 56548

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

7. UNIT AGREEMENT NAME: N/A

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

8. FARM OR LEASE NAME: Sorrel Butte

2. NAME OF OPERATOR: Nova Natural Resources Corp./Powell Exploration Co.

9. WELL NO.: #33-1

3. ADDRESS OF OPERATOR: 1900 Wazee Street - Suite 305 - Denver, CO 80202

10. FIELD AND POOL, OR WILDCAT: Wildcat

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 580' FSL & 680 FEL Sec. 33, T29S, R12E
At top prod. interval reported below
At total depth: Same

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 33, T29S, R12E

43-055-30039

14. PERMIT NO. | DATE ISSUED

12. COUNTY OR PARISH: Wayne | 13. STATE: Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
1-24-91	3-26-91	PA'D 3-28-91 Per Sundry Rec'd 4-12-91	4700' KB 4690 GL	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
2406'	surface		→	XX	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

25. WAS DIRECTIONAL SURVEY MADE

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIPMETER COMPUTATIONS (STATIGRAPHIC & STRUCTURAL) 4-11-91
Dual Induction, ~~Density~~-Neutron-Gamma ray, ~~4~~-arm dipmeter

27. WAS WELL CORED: 2070'-2232'

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	20	318'	12 1/4"	13 cu yds back to surface 0'	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
To be sent under seperate cover: Electric logs, Mud log
Drilling Report, Core analysis, Geologic report

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Carl R. Peaker TITLE Consultant DATE April 11, 1991

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Moenkopi	2070'	2232'	Cored 162' Recovered 162' No DST's

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Navajo	240'	
Kayenta	980'	
Wingate	1173'	
Chinle	1493'	
Mossback	1738'	
Moenkopi	1839'	
Sinbad	2250'	
White Rim	2282'	

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TerraTek Core Services

Final Report

Routine Core Analysis

NOVA NATURAL RESOURCES CORPORATION

43-055-30039

Sorrel Butte 33-1 Well
Wayne County, Utah

TTGS File No. 5863

Prepared for:

Nova Natural Resources Corporation
Suite 470
1621 18th Street
Denver, Colorado 80202

Prepared by:

TerraTek Geoscience Services
University Research Park
360 Wakara Way
Salt Lake City, Utah 84108

April 1991

CONFIDENTIAL

TerraTek

Geoscience Services

TerraTek Core Services

April 11, 1991

Nova Natural Resources Corporation
Suite 470
1621 18th Street
Denver, Colorado 80202

Attn: Mr. Robert E. McDonald

Subject: Routine Core Analysis; Sorrel Butte 33-1 Well; Wayne County, Utah; TTGS File No. 5863

Dear Mr. McDonald:

Diamond coring equipment and water base mud were used in the Sorrel Butte 33-1 Well to obtain 4.0-inch diameter core from the interval 2100 feet to 2227 feet. TerraTek Geoscience Services received 45 segments of the core from which 50 samples were selected for analysis. One sample was analyzed for each foot of core received. Residual fluids were preserved with Saran film and large zip-lock bags.

Residual fluids were removed and measured by means of the controlled temperature retort extraction technique on 100-gram crushed samples. Porosities and permeabilities were measured on 1.0-inch diameter plugs drilled from locations adjacent to the crushed samples. Porosities were determined by measuring grain volumes in a helium expansion porosimeter using Boyle's law and bulk volumes by mercury displacement. Permeabilities to nitrogen were measured in a Hassler sleeve using an orifice-equipped pressure transducer to monitor downstream flow. The results of these measurements are tabulated on pages 1 through 3. A porosity versus permeability crossplot follows at the end of this report.

We await instructions from you as to any additional work which you may desire for this core. Please relay instructions for additional work and shipping of the core segments to Jeanne Grazier. She can be reached at (801)584-2476.

We sincerely appreciate this opportunity to be of service and hope that we can work together again on future projects.

Best regards,
TerraTek Geoscience Services

Kevin R. Francis
Quality Control Supervisor

Distribution of Final Reports

NOVA NATURAL RESOURCES CORPORATION

Sorrel Butte 33-1 Well
Wayne County, Utah

TTGS File No. 5863

16 copies sent to:

Rod Markham
1600 Broadway, Suite 1212
Lubbock, Texas 79401

2 copies sent to:

Jim Taets
Nova Natural Resources
P.O. Box 481388
Denver, Colorado 80248-1388

2 copies sent to:

Joanne Bernasek
Amoco
P.O. Box 800
Denver, Colorado 80201

1 copy sent to:

Carolyn Olsen, Sample Librarian
Utah Geologic & Mineral Survey
4060 South 500 West
Salt Lake City, Utah 84123

1 copy sent to:

Robert E. McDonald
Robert E. McDonald, Trust
P.O. Box 1132
Pismo Beach, California 93448

TerraTek Geoscience Services®

University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - FAX (801) 584-2408

NOVA NATURAL RESOURCES

Well:	Sorrel Butte 33-1	State:	Utah	Date:	12-APR-1991
Field:	Wildcat	County:	Wayne	TTCS File #:	5863
Drilling fluid:	Water Base	Location:	Sec.3-T29S-R12E	Elevation:	

RETORT ANALYSIS - BOYLE'S LAW POROSITY

Sample Number	Depth (feet)	Permeability Horz (md)	Permeability Vert (md)	Porosity %	Saturation Oil %	Saturation H2O %	Grain Density (gm/cc)	Lithology
1	2100.0-01.0	.25		11.1	21.8	9.0	2.74	Ss,ltbrn,vfgr,dol,bdd
2	2101.0-02.0	.76		14.4	22.9	8.3	2.70	Ss,ltbrn,vfgr,dol,bdd
3	2105.0-06.0	.50		14.5	18.2	13.1	2.72	Ss,ltbrn,vfgr,dol,bdd
4	2107.0-08.0	.48		13.7	30.2	15.4	2.69	Ss,ltbrn,vfgr,dol,bdd
5	2180.0-81.0	.17		10.7	20.0	10.6	2.70	Ss,ltbrn,vfgr,dol,bdd
6	2181.0-82.0	.23		11.1	20.2	8.0	2.70	Ss,ltbrn,vfgr,dol,bdd
	2182.0-83.0							Interval Missing
7	2183.0-84.0	.39		11.8	19.4	7.8	2.70	Ss,ltbrn,vfgr,dol,bdd
8	2184.0-85.0	.09		10.4	31.8	8.5	2.71	Ss,ltbrn,vfgr,dol,bdd
9	2185.0-86.0	.03		3.9	19.9	15.1	2.73	Ss,ltbrn,vfgr,dol,dismpyr,bdd
10	2186.0-87.0	.07		8.4	23.5	5.7	2.70	Ss,ltbrn,vfgr,dol,bdd
11	2187.0-88.0	.09		7.9	18.5	2.3	2.68	Ss,ltbrn,vfgr,dol,bdd
12	2188.0-89.0	.05		7.2	19.1	8.9	2.69	Ss,ltbrn,vfgr,calc
13	2189.0-90.0	.16		9.8	13.6	5.7	2.70	Ss,ltbrn,vfgr,calc
14	2190.0-91.0	.12		8.9	27.6	3.1	2.67	Ss,ltbrn,vfgr,calc
15	2191.0-92.0	.07		7.9	21.9	5.0	2.69	Ss,ltbrn,vfgr,calc
16	2192.0-93.0	.18		9.9	16.2	6.4	2.68	Ss,ltbrn,vfgr,calc
17	2193.0-94.0	.47		13.4	21.2	8.1	2.68	Ss,ltbrn,vfgr,dol
18	2194.0-95.0	.07		8.0	14.5	6.8	2.69	Ss,ltbrn,vfgr,dol
19	2195.0-96.0	.11		8.8	27.3	5.1	2.69	Ss,ltbrn,vfgr,dol

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NOVA NATURAL RESOURCES
Well: Sorrel Butte 33-1

Date: 12-APR-1991

TTCS File #: 5863

RETORT ANALYSIS - BOYLE'S LAW POROSITY

Sample Number	Depth (feet)	Permeability Horz (md)	Permeability Vert (md)	Porosity %	Saturation Oil %	Saturation H2O %	Grain Density (gm/cc)	Lithology
20	2196.0-97.0	.27		11.6	19.6	7.7	2.68	Ss,ltbrn,vfgr,dol
21	2197.0-98.0	.20		11.1	17.7	6.3	2.68	Ss,ltbrn,vfgr,dol
22	2198.0-99.0	.77		13.2	23.1	6.4	2.67	Ss,ltbrn,vfgr,dol,bdd
23	2199.0-00.0	.38		11.1	17.2	8.1	2.66	Ss,ltbrn,vfgr,dol,bdd
24	2200.0-01.0	.84		13.3	15.8	7.4	2.69	Ss,ltbrn,vfgr,dol,bdd
25	2201.0-02.0	.85		13.1	23.9	3.5	2.68	Ss,ltbrn,vfgr,dol,dismpyr
26	2202.0-03.0	1.1		13.4	23.1	7.2	2.69	Ss,ltbrn,vfgr,dol,dismpyr
27	2203.0-04.0	1.4		13.5	21.6	8.3	2.70	Ss,ltbrn,vfgr,dol
28	2204.0-05.0	.78		11.7	18.4	7.0	2.67	Ss,ltbrn,vfgr,dol
29	2205.0-06.0	1.2		13.8	24.5	7.1	2.69	Ss,ltbrn,vfgr,dol
30	2206.0-07.0	.28		10.5	23.7	8.3	2.68	Ss,ltbrn,vfgr,dol,bdd
31	2207.0-08.0	9.4		15.4	27.1	2.1	2.66	Ss,ltbrn,vfgr,dol,bdd
32	2208.0-09.0	.53		11.5	31.1	9.7	2.67	Ss,ltbrn,vfgr,calc
33	2209.0-10.0	.45		8.6	23.1	4.5	2.65	Ss,ltbrn,vfgr,calc,bdd
34	2210.0-11.0	.22		10.2	17.5	4.6	2.69	Ss,ltbrn,vfgr,calc,bdd
35	2211.0-12.0	.02		3.7	31.9	12.8	2.66	Ss,ltbrn,vfgr,calc
36	2212.0-13.0	.28		10.4	28.6	10.4	2.68	Ss,ltbrn,vfgr,dol
37	2213.0-14.0	.26		9.9	26.2	6.9	2.68	Ss,ltbrn,vfgr,dol
38	2214.0-15.0	.07		6.7	25.7	15.8	2.67	Ss,ltbrn,vfgr,dol
39	2215.0-16.0	.12		9.5	32.2	16.1	2.68	Ss,ltbrn,vfgr,dol
40	2216.0-17.0	.01		2.1	11.0	19.2	2.68	Ss,ltbrn,vfgr,dol
41	2217.0-18.0	.79		12.3	23.0	7.1	2.66	Ss,ltbrn,vfgr,dol
42	2218.0-19.0	.20		10.7	24.0	10.7	2.70	Ss,ltbrn,vfgr,dol

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NOVA NATURAL RESOURCES
Well: Sorrel Butte 33-1

Date: 12-APR-1991

TTCS File #: 5863

RETORT ANALYSIS - BOYLE'S LAW POROSITY

Sample Number	Depth (feet)	Permeability Horz (md)	Permeability Vert (md)	Porosity %	Saturation Oil %	Saturation H2O %	Grain Density (gm/cc)	Lithology
43	2219.0-20.0	.14		9.9	26.3	10.4	2.68	Ss,ltbrn,vfgr,dol
44	2220.0-21.0	.21		10.3	22.0	7.2	2.69	Ss,ltbrn,vfgr,dol
45	2221.0-22.0	.21		10.8	36.1	9.9	2.68	Ss,ltbrn,vfgr,dol
46	2222.0-23.0	.32		11.1	30.9	9.3	2.69	Ss,ltbrn,vfgr,dol
47	2223.0-24.0	.33		11.6	31.3	9.2	2.69	Ss,ltbrn,vfgr,dol
48	2224.0-25.0	.34		11.1	32.4	11.0	2.68	Ss,ltbrn,vfgr,dol
49	2225.0-26.0	.31		11.8	28.3	10.7	2.70	Ss,ltbrn,vfgr,dol
50	2226.0-27.0	.05		7.4	30.6	15.8	2.68	Ss,ltbrn,vfgr,dol

DESCRIPTION SCHEME FOR CLASTIC SEDIMENTARY ROCKS:
ROCK TYPE, COLOR, GRAIN SIZE, CEMENT, ACCESSORIES AND STRUCTURES

KEY TO ABBREVIATIONS:

alt - altered
anhy - anhydrite(ic)
arg - argillaceous
bdd - bedded
bent - bentonite
bf - buff
bioturb - bioturbated
bit - bitumen
bl - blue(ish)
blk - black
bnd - banded
brec - breccia(ted)
brn - brown
bur - burrowed
c - coarse
calc - calcite(areous)
cgl - conglomerate
chlor - chlorite
cht - chert
chty - cherty
cly - clay(ey)
clyst - claystone
dism - disseminated
dk - dark
dol - dolomite(ic)
f - fine
fis - fissile
fos - fossil(iferous)
fri - friable
gn - green
gr - grain(ed)
grnl - granule
gy - gray
gyp - gypsum(iferous)
hem - hematite(ic)
incl - inclusion
lam - laminated
lav - lavender
lig - lignite(ic)
lt - light
m - medium
mar - maroon
mas - massive
mica - micaceous
o - oil
org - organic
orng - orange
pbl - pebble
pk - pink
purp - purple
pyr - pyrite(ic)
qtz - quartz
red - red
sa - salty
sdy - sandy
sh - shale
shy - shaley
sid - siderite
sil - silica(eous)
sl - slightly
sltst - siltstone
slty - silty
ss - sandstone
stn - stain(ed)(ing)
str - streak
styl - stylolite
tan - tan
v - very
vc - very coarse
vf - very fine
wh - white
wthrd - weathered

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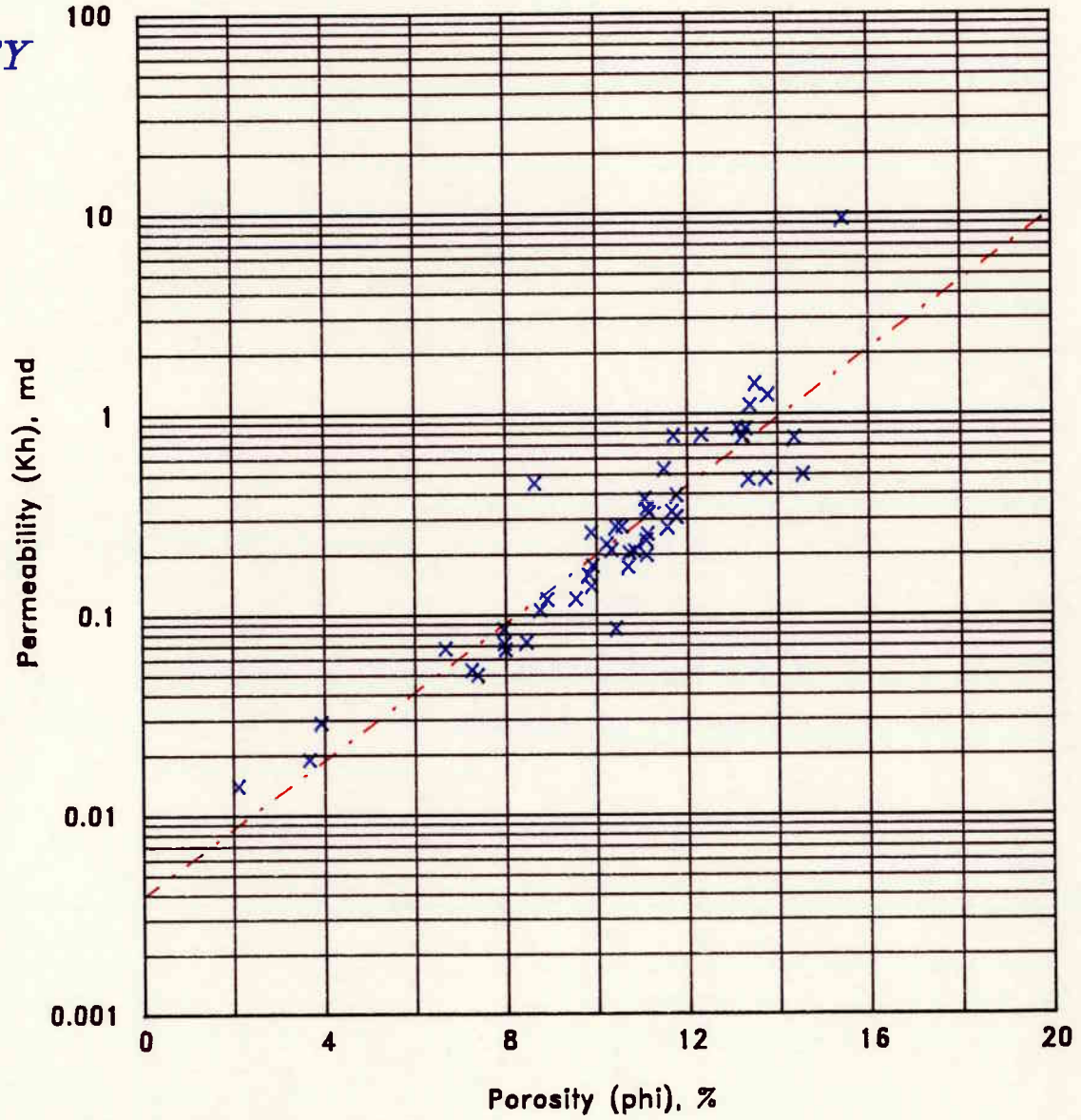
HORIZONTAL PERMEABILITY VS POROSITY

NOVA NATURAL RESOURCES
Sorrel Butte 33-1 Well
Wayne County, Utah
April 12, 1991

Depth Interval: 2100 to 2227 Feet		
TTGS# 5863		
Porosity (phi), %		
Min	Max	Average
2.100	15.442	10.459
Permeability (Kh), md		
Min	Max	Geo. Ave
0.014	9.424	0.240
Equation of the Line		
log Kh = α phi + β		
log Kh = 0.1708 phi −2.4060		
Correlation Coefficient : 0.916		



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DIVISION OF OIL GAS & MINING

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: USA Utah 56548

6. If Indian, Allottee or Tribe Name: N/A

7. If Unit or CA, Agreement Designation: N/A

1. Type of Well: [XX] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.: Sorrel Butte 33 -1

2. Name of Operator: Nova Natural Resources Corp./Powell Exploration Co.

9. API Well No.: ~~#33-1~~ 43-055-30039

3. Address and Telephone No.: 1900 Wazee Street - Suite 305 - Denver, CO 80202

10. Field and Pool, or Exploratory Area: Wildcat

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
580' FSL & 680 FEL
Sec. 33, T29S, R12E

11. County or Parish, State: Wayne, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[XX] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[XX] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other _____	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

8 5/8", 20 #/ft surface casing set at 318'. 6 1/2" hole drilled to 2406'. Well cored from 2070' - 2232'. Attempt 1 DST - unable to get tools to bottom. Fresh water encountered in the Navajo from 240' to 950'. Well plugged by displacement of cement through drill pipe. Plug #1 2200' - 2300' with 21 sxs of cement, Plug #2 1450' - 1550' with 25 sxs of cement, Plug #3 820' - 1020' with 50 sxs of cement. WOC and tagged Plug #3 at 825', Plug #4 218' -418' with 68 sxs of cement. WOC and tagged Plug #4 at 227'. Plug #5 surface to 50' with 17 sxs of cement. All plugs set and tagged were witnesse by Theron Mitchell of the BLM Cedar City, Utah District. Installed dry hole marker. **Work was performed on March 28, 1991.**

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 4/16/91
BY: [signature]

14. I hereby certify that the foregoing is true and correct

Signed Carl L. Lesher Title Consultant Date April 10, 1991

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

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APR 15 1991
DIVISION OF
OIL GAS & MINING

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REPORT OF WATER ENCOUNTERED DURING DRILLING - FORM 7 (1/89)

1. Well name and number: Sorrel Butte #33-1
   API number: 43-055-30039

2. Well location: QQ sese section 33 township 29S range 12E county Wayne

3. Well operator: Nova Natural Resources Corp./Powell Exploration Co.
   Address: Suite 305, 1900 Wazee, Denver, CO. 80202 phone: 303-293-2902

4. Drilling contractor: Beeman Drilling CO.
   Address: P.O. Box 788 phone: 801-259-7281
   Moab, Utah 84532

5. Water encountered (continue on reverse side if necessary)

Depth		Volume (flow rate or head)	Quality (fresh or salty)
from	to		
240'	890'	**	fresh 900 ppm chlorides
** The well was drilled with air and aerated water. Therefore it was difficult to estimate a flow rate or to determine if the well would flow. The well was mudded up at 2232' and no more water was encountered.			

6. Formation tops: Navajo - 240', Kayenta - 980', Wingate - 1173'. Chinle - 1493', Mossback - 1738', Moenkopi - 1839', Sinbad - 2250', White Rim - 2282'.

If an analysis has been made of the water encountered, please attach a copy of the report to this form.

I certify that this report is true and complete to the best of my knowledge.

Name Carl L. Lesher Signature Carl L. Lesher
Title Consultant Date April 11, 1991

Comments:

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR Nova Natural Resources Corporation

OPERATOR ACCT. NO. N 2205

ADDRESS P.O.Box 481388

Denver, CO 80248-1388

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
A	99999	99998	Conf. dil 43-055-30039	Sorrel Butte 33-1	SESE	33	29S	12E	Wayne	1/24/91	

WELL 1 COMMENTS: Well spudded 1/24/91. Operations were temporarily suspended on 1/29/91 to await better weather. Operations resumed 3/19/91 Well was plugged and abandoned 3/29/91.

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE

WELL 2 COMMENTS: Federal-Lease Proposed Zone - White Rim
Field-Wildcat CDME will chg. entity number when completion info. is added. 7fp
Unit-N/A

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE

WELL 3 COMMENTS:

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE

WELL 4 COMMENTS:

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE

WELL 5 COMMENTS:

ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

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DIVISION OF
OIL GAS & MINING

Signature [signature]

Title V. P.   Date 4/12/91

Phone No. (303) 293-2962

LESHER
ENGINEERING

PETROLEUM
CONSULTING

10390 W. 34th Avenue
Wheat Ridge, Colorado 80033
(303) 238-5622

NOVA NATURAL RESOURCES CORPORATION
SORREL BUTTE #33-1
SESE Section 33, T29S, R12E
Wayne County, Utah

43-055-30039

DRILLING REPORT

1-23-91 Move in Bob Beeman Drilling Company Rig.

1-24-91 Rig up drilling rig. GL - 4690', KB - 4700'.

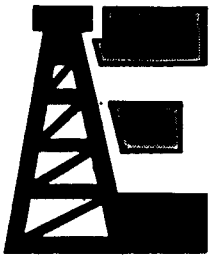
1-25-91 Spud in at 7:00 pm 1-24-91. Drilled 12 1/4" hole to 270' with air. Hole making a small amount of water at 250'. Started injecting foam.

1-26-91 Continued drilling 12 1/4" hole with air mist to 320'. Pulled out of hole and rigged up to run surface casing. Ran 308' of 8 5/8", 20# new casing set at 318' KB. Rigged up to cement surface casing with ready-mix cement. Dumped 8 yards of cement down casing. Installed rubber plug and attempted to pump cement. No good, cement had flash set. Pushed rubber plug 60' down hole. WOC. Order out 8 yards of ready mix to pump down backside. Nipple up well head.

1-27-91 Pumped 5 yards of cement down backside. Good cement back to surface. WOC. Nipple up BOPs. Pressure test pipe rams to 750 psi for 15 min. OK. Pressure test kelly cock to 750 psi for 15 min. OK. Attempt to pressure test blind rams. No good. Work on BOP's. Unable to get blind rams to hold any pressure. Order new set of BOP's from Grand Junction, CO.

1-28-91 Wait on BOP's. Drilled out all but 60' of cement from inside surface casing with 6 1/2" bit. Change out BOP's. Pressure test blind rams to 750 psi for 15 min. OK. Attempt to pressure test pipe rams. No good. Unable to get pipe rams to hold any pressure.

1-29-91 Decided to suspend operations until warmer weather. Amoco granted a 60 extension for continuation of drilling operations. Pulled out of hole laying down drill pipe and drill collars. Rigged down drilling rig. Installed cap on surface casing. All cementing operations and BOP pressure tests were witnessed by



Sorrel Butte #33-1

1-29-91 (cont.) Theron Mitchell of the BLM. Verbal approval to suspend operations was received from Michael Jackson of the BLM.

3-19-91 Move in and rig up Bob Beeman Drilling Company Rig #27. Install BOPs and pressure test blind rams to 750 psi.

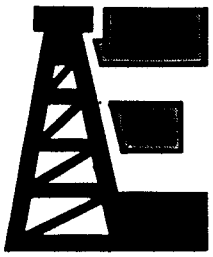
3-20-91 Continue rigging up. Pressure test blind rams, pipe rams, choke manifold, kelly cock, and casing to 750 psi for 15 min. OK. Pressure tests witnessed by Theron Mitchell of the BLM. Pick up 6 1/2" Sec. S33F bit and ran in hole with 10 - 5" drill collars and drill pipe. Drilled cement from 260' to 318' casing shoe. Survey at 300' 2 degrees. Drilled 6 1/2" hole to 840'. Drilled with air mist and water increasing as drilling. Preparing to drill with aerated water.

3-21-91 Drilled 6 1/2" hole to 850' with bit #1. Pulled out of hole. Ran in hole with bit #2 - Smith F2. Drilled 6 1/2" hole to 1300' with aerated water with soap, polymer and KCl added to water.

3-22-91 Drilled 6 1/2" hole to 1880' with bit #2. Survey at 1300' misrun. Drilled with aerated water with soap, polymer, and KCl added to water. Injecting 200 cfm air.

3-23-91 Drilled 6 1/2" hole to 1890'. Pulled 90' and ran survey. Misrun. Drilled 6 1/2" hole to 2070' with bit #2. Pulled out of hole. Pipe stuck 100' off bottom. Work pipe free and pull through tight spots for 100'. Pulled out of hole. Pick up 40' core barrel and ran in hole. Broke circulation at 1500' and washed 80' to bottom.

3-24-91 Cut Core #1 from 2070' - 2106' (36'). Pulled out of hole and recovered 36' of core. Ran in hole, washed 36' to bottom and cut Core #2 from 2106' - 2127' (21'), core barrel jammed. Pulled out of hole and recovered 21' of core. Ran in hole, washed 60' to bottom and cut core #3 from 2127' - 2167' (40'). Coring with aerated water with soap, polymer, and KCl added to water.



Sorrel Butte #33-1

3-25-91 Pulled out of hole and recovered 40' of core #3. Ran in hole, washed 100' to bottom and cut Core #4 from 2167' - 2207' (40'). Pulled out of hole and recovered 40'. Ran in hole, washed 80' to bottom and cut Core #5 from 2207' - 2232' (25'). Pulled out of hole and recovered 25'. Ran in hole with 6 1/2" bit and reamed core hole from 2070' - 2232'. Reamed with water with soap, polymer, and KCl. Cut out air.

3-26-91 Pulled up to 1500'. Mixed up mud. Washed and reamed 250' to bottom. Mix mud and circulate hole clean. Pulled out of hole. Made up test tools and stood back in derrick. Ran in hole to bottom. No tight spots and 2' of fill. Circulate hole clean. Pulled out of hole with bit. Pick up test tool to test interval 2185' - 2232'. Ran in hole and hit bridge at 1792'. Unable to work test tools through bridge. Pulled out of hole and laid down test tools. Ran in hole with bit #3 Smith F3.

3-27-91 Continued in hole and hit bridge at 1785'. Ream 60' and continue in hole. Wash 40' of fill to bottom. Drilled 6 1/2" hole to 2406' with bit #3. Drilled with fresh water gel with polymer. Circulate hole clean. Made 32 stand short trip. Circulate hole and wait on logging truck.

3-28-91 Circulate while waiting on loggers. Pulled out of hole to log. Halliburton Logging Service ran Dual Induction Guard Log from 2394' - 318'. Loggers TD 2396'. Ran Spectral Density Dual Spaced Neutron Log from 2393' - 318'. Ran 4 arm dipmeter from 2396' - 2000'. Rigged down loggers. Laid down drill collars and core barrel. Ran in hole with drill pipe to 2300'. Set cement Plug #1 from 2200' - 2300' with 21 sxs of cement. Plug #2 from 1450' - 1550' with 25 sxs of cement. Plug #3 from 820' - 1020' with 50 sxs of cement. Wait on cement.

3-29-91 Ran in and tagged firm cement at 825'. Set Plug #4 from 218' - 418' with 68 sxs of cement. Wait on cement. Ran in and tagged firm cement at 227'. Set top Plug #5 from 50' back to surface with 17 sxs of

Sorrel Butte #33-1

3-29-91 (cont.) cement. All Plugs and Tagging of Plugs was witnessed by Theron Mitchell of the BLM. Install dry hole marker and release rig. Well Plugged and Abandoned 2-28-91.

Water Samples:
1900' - Resistivity - 6 ohms at 70 degrees. 900 ppm
2070' - Resistivity - 6 ohms at 70 degrees. 900 ppm
2127' - Resistivity - 5 ohms at 65 degrees. 1175 ppm

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April 30, 1991

Division of Oil, Gas & Mining
#3 Triad Center, Suite 350
355 West North Temple
Salt Lake City, UT 84180-1203

Re: Nova Natural Resources
Sorrel Butte #33-1
Wayne County
43-055-30039 Sec. 33, T. 29S, R. 12E

Enclosed is a copy of the sample descriptions and core descriptions from the above captioned well.

If you have any questions, please contact our office.

Yours truly,

Robert McDonald /SEK

Robert E. McDonald

REM/sek
enclosure

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CORE DESCRIPTIONS
Nova Natural Resources Sorrel Butte #33-1
S.E. S.E Sec. 33, T.29S.,R. 12E

General Comments on Cores

Lithology

The cores in the Torrey are nearly all described in terms of dolomites, limestones or mudstones, with hopefully appropriate modifying constituents. This essentially carbonate-mudstone section caused me considerable concern, because the Torrey has commonly been described as essentially sandstones and siltstones, including cores and samples in the nearby Tennessee Gas Tramission, #1-A USA Sorrel Butte test, located in SWNE section 33, T.29S., R.12E. Shortly before going out on the Nova well, I ran the samples on the Tennessee Gas well, and indeed found the best indicator of the Torrey to be a grayish-green very pyritic mudstone and dolomite section. I kept looking at oil impregnated core chips described as sandstone, shaking my head and thinking either these are carbonates--probably Dunhams packstones and wackestones-or my eyes have given way completely, tri-focals not withstanding.

The Nova Sorrel Butte well cored approximately 120 feet of Torrey, and I still do not believe that we are dealing with an essentially siliciclastic section. The mud loggers initially wanted to describe the section as sandstone, but after discussing and examining the samples with the lead logger, who is a geologist, he agreed we were dealing with carbonates--although silty carbonates--an observation with which I agree. In fact, the mudstones and carbonates are so pervasively silty that I do not bother describing each mudstone or carbonate as silty, because they are always silty; however, the silts are fine to very fine and an accessory, not the primary fabric. When I use the term mudstone, I refer to the AGI "Glossary of Geology" definition.

I once again re-examined my carbonate conclusions when I received the core analyses from TerraTek. These are competent people, and they described the cores as dolomitic or calcareous sandstones. That portion of the core sent for analyses were the best dolomites, and do tend to sucrosic in texture, which is easily mistaken for sandstone. After seeing the TerraTek description, I broke different sections of the core into small cutting-sized fragments and dropped them in HCl (15%) in a spot dish. They effervesced slightly, but after a few hours they had not dissolved. I crushed them with the tweezers, and they appeared to keep crushing into silt and clay-sized particles. I put the dish outside to allow the acid to evaporate. After three days in the sun in weather that was windy and in the 60's each day, the crushed samples were still saturated with water, essentially mud. I finally dried them in a sample tray over a gas flame, and they became hard little balls, like drying up mud. I then crushed the balls as much as possible with tweezers, and they were reduced to fine silts and clays. There was not one sand-sized grain, or even a coarse silt-sized grain observed.

There is one other lithology that concerns me in the foregoing core descriptions, and that is the question of anhydrite. We are dealing with a depositional environment that would be conducive to anhydrite, and although no bedded anhydrite was present, I suspect it is present as an accessory. The brown to dark brown to black oil-impregnated dolomites frequently display a white powdery-like material on broken surfaces, particularly when rubbed, as being carried in a sample bag. Tidal flat dolomites (protodolomites) commonly have poor ordering and nearly always composed of very small crystals ranging in size from 2 to 4mm. It was impossible to tell if the whitish material was from abrasion of these micro-crystalline dolomites or from sucrosic inter-crystalline anhydrites.

The degree of calcareousness is not always carefully recorded. Most of the dolomites were at least slightly calcareous, and frequently graded into calcareous dolomites and dolomitic limestones. Within a single core chip, the carbonates and/or mudstones may range from non or slightly calcareous to very calcarerous, which made documentation of all these changes beyond the scope of this description.

Depositional Environment

The cores represent an essentially carbonate tidal flat environment, certainly in part and perhaps mostly supratidal with some upper intercalfacies. This carbonate tidal flat certainly grades into siliciclastic Moenkopie tidal flats in other areas, as does the Permian in West Texas.

Indication of supratidal environment include mud cracks, and the encasement of impermeable muds by more permeable dolomite. There is an abundance of beautifully preserved laminations, both thick and thin, horizontal and with low angle cross-bedding, which are commonly restricted to supratidal and upper intertidal zones. Some of the thin beds and laminations described as "wavy-bedded" is believed algal in origin. The algal mats in the Persian Gulf act as sticky flypaper to trap windblown dust. During storms, a rusty-tan coating of dust covers the algal mats within hours, but a day or two later algae recolonizes the surface producing a distinct lamination of detrital material. Typically, this dust contains about 60% detrital dolomites. These type of laminations from either alternating flooding and deposition of marine sediment and algal mat growth, or alternating eolian deposition and algal growth appears to have been common.

There were also birds-eye or fenestrate structures, commonly believed a supratidal indicator in predominately muddy rocks.

The very pervasive dull, grayish-green color of all the carbonates and mudstones that were not oil impregnated, as well as the ubiquitous occurrence of finely disseminated pyrite, certainly indicates reducing conditions not anticipated on an arid sabkha. A high percentage of the dolomites in the upper Torrey and all the dolomites in the lower Torrey were lightly to heavily saturated with an asphaltic crude oil. It is my belief that this abundance of crude is responsible for creating widespread reducing conditions in the subsurface.

Finally, the cores that were not sent to TerraTek for analysis were numbered, boxed, and stored with the Utah Geological and Mineral Survey in their Salt Lake City core and sample Library.

0 = 10% to 50% oil staining, = >50% oil staining

Core #1, 2070 - 2106, Dip about 2° - 3°

2070.1 Dull greenish-grey, non to sl. calc., earthy dol., pyritic, lens of 80% pyrite in calc. dol. matrix, even to sl. x-bedded, thinly interbedded.

2070.7 Same color and texture a/a, ranging from sl. calc. dol. through dol. ls.

2071.2 a/a

2071.7 Dull grnish-gry, f. xln., dol. ls., pyritic, scattered microcubes

2072.2 Dull grnish-gry, earthy to f. xln., sl. calc. to calc. dol., pyrite scattered and concentrated in layers

2072.8 Lt. gry, v.f.-f. xln. ls., small disseminated pyrite cubes, abdt.

2073.4 Dull grnish-gry earthy-f. xln., v. thinly banded ls. and calc. dol., pyritic, hd., breaks w/conchoidal fract.

2073.8 Dull grnish-gry., v.f. xln., earthy appearing, non to sl. calc. dol., abdt., v.f. disseminated pyrite.

2074.0 Dull grnish-gry., f. xln-xln. ls., f. dissem. pyrite

2074.8 Dull grnish-gry., xln ls., abdt. v f. dissem. pyrite and "shiny" partings. This "shiny partings terminology is very non-geologic, but cannot be accurately identified w/magnification available (25x). They appear to be micaceous flakes on macro examination, but both the logger and I used all our powers from 7x to 25x and could not identify mica flakes. Some of the highly reflective mtl. can be attributed to an abundance of pyrite on the partings, but more of the "shiny" seemes to be due to a plethora of tiny, flattened reflective crystal faces. These partings turn occur with fair frequency through the entire cored interval, but are legitimate "partings", not fractures, and show no signs of slippage.

2075.2 Dull greenish-gry mixture f. xln-xln. ls. and dol. mudst., laminae fol lowing v. low angle x-bedding layers.

2075.7 Dull greenish-gry, f. xln. ls., abdt. pyrite concentrated in thin laminae in ls.

2076.2 Dull grnish-gry., f. xln.-xln. ls and dol. ls., less pyrite

2076.8 Dull grnish-gry mudst. w/thin laminae (1/4"-1/8") of f. xln. ls., v. f. dissem. pyrite.

2077.2 a/a w/laminae lensing in conformity w/v. low angle x-bedding. Carb. laminae less calc., prob. dol. ls to Calc. dol.

2077.7 Dull grnish-gry., f. xln., sl. calc. dol. w/dissem. pyrite

2078.3 Thin, lensing interbed laminae of sl. calc. mudst. and f. xln. ls., following v. low-angle x-bed.

2078.6 Dull grnish-gry., silty, calc. f. xln. dol., cut w/numerous mudstone x-laminae

2079.3 Dull grnish-gry., f. xln., silty calc. dol., v. abdt. dissem. pyrite xls., also conc. on laminae.

2079.8 Dull grnish-gry, massive, silty dol. mudstone, brks w/conchoidal fract., finely dissem. pyrite

2080.2 Same as 2079.8

2080.9 Same as 2079.8, hairline vert. fract., no stn. closed w/v. thin ctg. calc. mtl.

2081.2 Dol. clost. a/a, no V.F., pyrite dissem. and conc. on laminae

2081.7 a/a

2082.2 a/a

2082.7 a/a

2083.3 Dull grnish-gry, massive, silty calc. mudst., pyrite both dissem. and as masses of v.f. xls irregularly placed in enclosing mudst., pyritic portions non calc.

2083.8 Dull grnish-gry., earthy, non to sl. calc. dol. w/mudstone partings, dissem. fine pyrite

● 2084.2 Thin, low angle x-bed laminae of dull grnish-gry. earthy dol. w/ concent. of pyrite crystals, and xln., tight, brown oil impreg. dol.

2084.7 Dull grnish-gry v.f. xln. dol. w/dull grnish-gry mudstone prtgs., dissem. pyrite

2085.3 Thin laminae dull grnish-gry f. xln., earthy dol. and dol. mudstone, pyrite dissem. and as small masses xls. blk. flecks asphaltic mtl.

2085.9 Dull grnish-gry dol. massive mudstone, 2 V.F. completely sealed w/v. pyritic calc. dol., xln.

2086.2 Dull grnish-gry, massive earthy dol., v. pyritic-dissem.

● 2086.7 Dull grnish-gry, f. xln. calc. dol. w/irreg. masses brwn-dk. brown oil impreg. dol.--about 50% oil stn.

● 2087.3 a/a, 60% oil impreg., oily part. sl. calc., non-stained dol. ls.

● 2087.7 a/a 90% oil impreg. dol., sl. calc., dissem. pyrite

● 2088.3 Dull grnish-gry f. xln., brown, v. sl. calc., oil impreg. dol., about 5% non-stn., dissem. pyrite

o 2088.7 Dull grnish-gry lenses f. xln., sl. calc. dol., about 10% brwn. oil impreg. in irreg. splotches, separated by thin, low angle x-bed laminae dull grnish-gry mudstone. Pyrite dissem., more abundant on mudstones.

2088.8-
2089.7 Hairline fract., closed w/asphalt and bleeding oil

● 2089.2 Brown, xln., sl. calc., oil impreg. dol., dissem. pyrite, 9" V.F sealed w/ asphalt

o 2089.7 Dull grnish-gry f. xln., earthy dol., about 15% irreg. brwn., oil stn.

2090.3 Dull grnish-gry, f.xln., sl. calc. dol., about 5% irreg. brwn. oil stn. v. abdt. dissem. pyrite

● 2090.7 a/a, about 50% oil impreg., stn. part sl. calc., barren dol. calc., 6" VF sealed w/asphalt

2091.3 Dull grnish-gry mudst., v. abdt., dissem. pyrite

o 2091.8 Dull grnish-gry v.f. xln., earthy dol., about 10% oil impreg., v. pyritic

2092.2 a/a, 5% oil impreg.

2092.7 a/a, <5% oil impreg.

● 2093.3 Thin lenses dk. brwn-blk., oil impreg., xln. to med. xln. dol., sep. by laminae and lenses dull grnish-gry dol. mudstone, laminae @ low angle x-bed, v. pyritic, both dissem. and concent. along laminae

● 2093.8 a/a

● 2094.4 a/a, except oil impreg. dol. lenses became v.f. xln and earthy

● 2094.7 Dull grnish-gry dol. mudst. w/20% oil impreg. xln. dol. distributed both as laminae and in chicken-wire effect in mudst.

o 2095.3 a/a, pyrite dissem. and clusters of small xls along laminae, 10% oil impreg.

● 2095.8 a/a, 60% oil impreg.

● 2096.2 Dull grnish-gry dol. mudst. and 60% xln. oil impreg. dol. distrib. as horizontal to low angle x-beds, both wedges and lenses.

● 2096.7 a/a, except distribution of lenses of dol. and mudst. horizontal–sub-horizontal, less pyrite

● 2097.3 a/a

● 2097.8 Dull grnish-gry and brown oil impreg. f. xln. dol., mixed together as in irregularly shaped porphyry, about 60% oil impreg.

● 2098.3 Brwn., oil impreg. f. xln. dol. w/30% dull grnish-gry earth f. xln. dol. as v. low angle x-bed lenses and laminae

● 2098.7 a/a

● 2099.2 Dull grnish-gry to brwn. oil impregnated dol. clayst.

● 2099.7 a/a

● 2100.3 F. xln. brwn., oil impreg. dol.

● 2100.8 a/a

● 2101.3 F. xln., sucrosic, brown oil impreg. dol., v. sl. calc.

- 2101.8 a/a
- 2102.3 Xln. light brwn. oil impreg. dol. in thinly-bedded laminae as wedges and lenses in low angle x-bedding, sep. by grnish-gry ptgs. that initially appear to be biotite, but under 25x can only identify abun dant tiny pyrite faces, some tarnished, and tiny xls. many flattened, that seem to be clear w/assoc. hyrdrocarbons give black sheen.
- 2102.8 a/a w/unstained lenses and platy partings, irregular wedges, wavy bedding.
- 2103.2 a/a
- 2103.7 Intbed. grnish-gry dol. mudst. w/dissem. pyrite and f. xln. dol. w/lt.-hvy stn. Even-bedded w/variable width bands of each.
- 2104.4 a/a w/low angle x-bed and the two lithologies mixed as variable width laminae following bedding.
- 2104.8 a/a w/bands thickening and oil impreg. dol. w/med. to hvy. stan., 70% stn.
- 2105.2 a/a
- 2105.6 Med. xln., sucrosic, brown, hvly. stn. dol.

Core #2, 2105.8 - 2127.3

- 2105.8 F. xln., brwn. dol., hvly. stn., even-bedded
- 2106.4 a/a w/grnish-gray. dol. mudst. laminae
- 2106.8 F. xln. lt. brwn. dol., lt. stn.
- 2107.2 F. xln. sucrosic brown dol., hvy stn.
- 2107.8 Dol. a/a, banded w/grnish-gry dol. clayst., even-bedded
- 2108.4 F. xln., sucrosic brown oil impreg. dol., hvy stn., even-bedding, tight
- 2108.8 a/a, zones scat. small (1/8") vugs bldg. oil, "birdseye structure"

● 2109.4 a/a not connected

● 2110.2 a/a

● 2110.7 a/a

● 2111.3 a/a

o 2111.9 V.F. xln. to arg., lt. brwn. dol. ls., lt. stn.

2112.4 F. xln. grnish-gry dol. ls., even-bedded

o 2112.8 Dull grnish-gry dol. mudst. w/fract. and cracks sealed w/v.f. xln. oil impreg. dol.

o 2113.1 Lt. brown oil impreg. v.f. xln. dol. and dol. dull grnish-gry mudst., v. thin, even interbeds (1/16" to 1/4") almost varve-like

2113.8 Thin intbed dull grnish-gry dol. clayst., lt. gry. v.f. xln. dol. w/v abdt. tiny pyrite and lt. brown, f. xln. dol. ls.

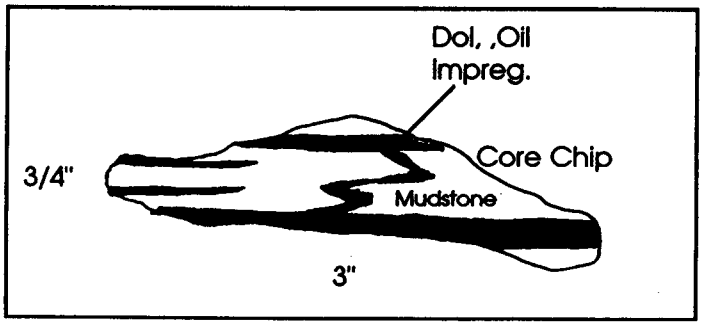
2114.3 a/a

2114.7 a/a

2115.2 a/a

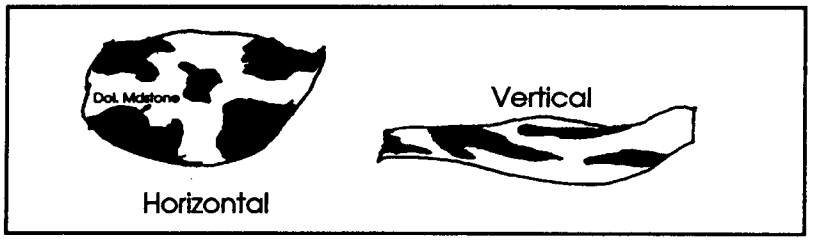
2116.2 Dull grnish-gry mudst. w/mud cracks horiz., verti., angular filled w/ v.f. xln. oil imgreg. dol. Typical of sabkhas where muds crack vertically, then detach horiz. and infill with more perm. dol.

2116.7 Dull grnish-gry dol. mudst. w/dissem. pyrite intbed w/v.f. xln-earthy, brwn oil impreg. dol., bands fairly even and 1/32"-1/4" thick but mudstone in places fract. w/dol. seal.



2117.3 Dull grnish-gry dol. mudst. and v.f. xln., earthy oil impreg. dol., w/v. abdt. tiny pyrite cubes irregularly dist. both horizontally and vertically

2117.8 a/a irregularly bedded



2118.3 a/a

2118.7 a/a

● 2119.3 a/a w/more oil impreg. dol., 70%

● 2119.8 a/a oil impreg. 60%

● 2120.4 Same irregular pattern and bedding, but mudstone gone and pattern created by lt. brwn. v.f. xln. earthy dol. and brwn. oil impreg. f. xln. dol., more heavily stn. Still dissem. pyrite

● 2120.8 a/a

● 2121.3 a/a

● 2121.8 a/a

o 2122.7 Dull grnish-gry f. xln. earthy dol. and f. xln., lt. brwn. oil impreg. dol., sl. calc., combined in irregular masses vert. and horiz., 30% stn.

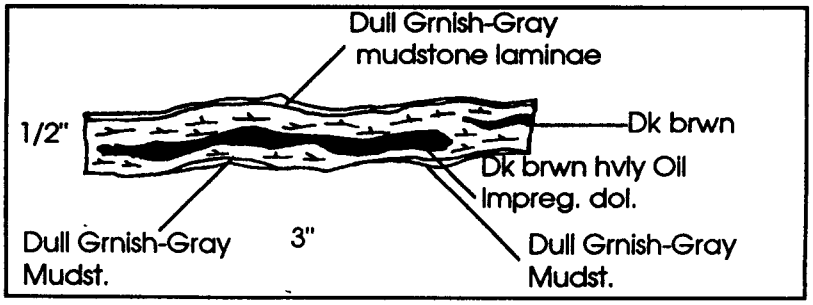
2123.7, 2124.3, 2125.3 Irregular horizontal and vertical mixtures, sometimes following bedding planes and sometimes cutting across, dull grnish-gry dol. claystone, unstained 20%, v.f. xln., earthy dol. w/lt. stn 60%, and xln. brwn. dol. w/hvy. stn. 20%

2125.7, 2126.2 Similar mix of lithologies and sat. to above, but more regularly thinly interbedded w/liths mostly following bedding planes.

2126.8, 2127.3 a/a

Core #3, 2127.3 - 2166.7

- ● 2127.7 V. dense, f. xln., earthy, lt. brwn. oil impreg. dol.
- ● 2128.2 a/a
- ● 2128.6 a/a
- ● 2129.2 a/a w/low angle dull grnish-gry laminae of flattened flakes and crystals, micro size, reflective, shiny, unidentifiable microscopically
- ● 2129.7 Med xln., brwn, sucrosic dol, hvy. stn.
- ● 2130.2 F. xln. brwn. oil impreg. dol., hvy stn.
- ● 2130.7 a/a
- ● 2131.2 a/a
- ● 2131.7 a/a
- ● 2132.2 v.f. - f. xln. brwn. oil impreg. dol., lt.-mod. stn. w/laminae dull grnish-gry, dol. low angle x-bdg.
- o 2131.7 Intbed V. thin beds and laminae dull grnish-gry dol. mudst. and v.f. xln. brwn. dol., lt. stn., about 50-50, even-bedded in general, but wedge-shaped laminae
- o 2132.2 a/a
- o 2132.7 a/a
- ● 2133.7 Irregularly bedded zones lt.-hvy. stnd., oil impreg. dol. w/thin beds and laminae dull grnish-gry dol. clayst.
- o 2134.2 a/a w/bedding irreg. to low angle x-bdg., more dull grnish-gry mudst.
- ● 2134.7 Lt.-dk brwn f. xln. oil impreg. dol. w/dull grnish-gry mudst., irreg. bedding



o 2135.3 a/a no hvy stn.

● 2135.8 Irreg. alt. areas dull grnish-gry f. xln. dol. and lt. brwn. oil impreg. f. xln. dol., w/ 1/4"-1/2" blk. blobs v. pyritic, v. hvly stn. dol.

2136.3 No hvy stn.

o 2136.7 Dull grnish-gry dol. mudst. w/pyrite dissem. and concen. small masses

o 2137.3 a/a w/thin laminae lt. brwn. oil impreg. earthy dol.

o 2137.7 a/a

● 2138.3 Lt. brwn. f. xln. oil impreg. dol. w/irreg. thin laminae and sm. fract. filling dull grnish-gry earthy dol. 80% oil impreg.

2138.8 Dull grnish-gry v.f. xln-earthy dol. w/thin beds and laminae lt. brwn. oil impreg. dol.

2139.2 Dull grnish-gry dol. mudst. and thin, even interbeds earthy oil impreg. dol.

2139.8 Lt. brwn. to blk. oil impreg. med. xln dol., mixed in irregular masses

2140.2 a/a

2140.8 Dull grnish-gry dol. mudst. w/thin beds and laminae brwn oil impreg., abdt. dissem. pyrite

o 2141.2 a/a, about 50-50 dull grnish-gry and brwn, but w/brwn also some times cutting across bedding in irregular masses--looks like both thin interbeds and deformed mud cracks cutting across beds.

2141.7 a/a, 20% oil impreg.

2142.3 V.F. xln-earthy lt. brwn. oil impreg. dol. w/thin irregular laminae dull grnish-gry dol. mudst.

o 2142.7 Irregular thin beds and small masses lt. brwn. v.f. xln-earthy and dull grnish-gry barren dol., about 50-50

o 2143.2 a/a

2143.7 Dull grnish-gry dol. mudst. w/thin beds and lenses earthy lt. brwn. oil impreg. dol.

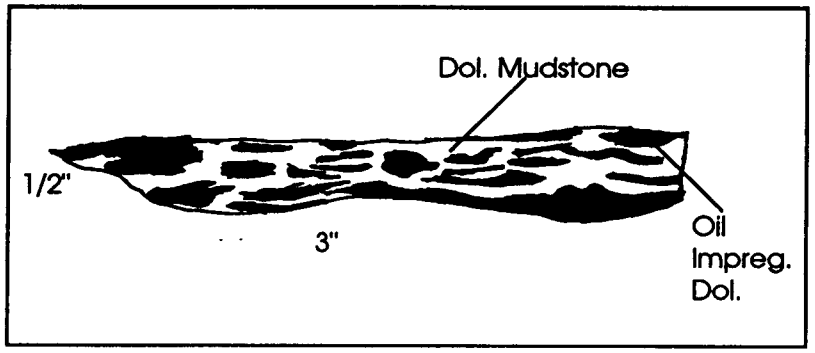
2144.2 a/a w/lt. brwn. dol. also as small masses, 30% dol.

2144.2 a/a

o 2145.2 Thin interbed irreg. beds, laminae, wedges dull grnish-gray dol. mudst. and earthy lt. brwn oil impreg. dol., about 50-50

o 2145.7 a/a

o 2146.2 Thin interbed mudst. and dol. a/a occurring as thin irregular beds, wedges, laminae and masses, 50-50



● 2146.7 a/a 60% oil impreg.

● 2147.2 Bedding a/a, but alt. between lt. brwn. oil impreg. f. xln. dol. (80%), dk. brwn f. xln. heavily oil impreg. dol. (10%), and dull grnish-gry barren earthy dol. (10%)

● 2147.7 a/a

● 4148.2 a/a

● 2148.7 V.f. xln., earthy lt. brwn. oil impreg. dol., w/dk. brwn hvly stnd. dol. as irregular thin lenses

o 2149.2 Dull grnish-gry v.f. xln. dol. w/v.f. xln. lt. brwn. oil impreg. dol. occur ring as thin irreg. beds and lenses, 20% dissem. pyrite

● 2149.6 a/a, oil impreg. dol. inc. to 50%

o 2150.2 a/a, oil impreg. dol. dec. to 20%, abdt. pyrite

o 2150.7 a/a

o 2151.4 a/a w/few large unconnected vugs containing heavy blk. tarry oil and abdt. pyrite

2151.8 Grnish-gray. dol. mudst., even-bedded, abdt. dissem. pyrite

● 2152.2 Grnish-gray dol. mudst. and f. xln. brwn. oil impreg. dol., combined as irregular masses cutting bedding, and as laminae 50-50

● 2152.9 a/a

● 2153.2 Grnish-gray dol. mudst. and f. xln. brwn. oil impreg. dol. occurring as small irregular masses w/o bedding

● 2153.7 a/a

● 2154.2 a/a, 60% oil impreg. dol.

● 2154.7 a/a, with rounded masses hvy. blk. stn. assoc. w/small concentra tions pyrite

● 2155.2 a/a

● 2155.7 V.F. xln. lt. brwn. oil impreg. dol. w/thin irreg. beds grnish-gray dol. mudst. and thin wedges and blobs of hvly. stn. dol.

● 2156.7 Lt. to med. brwn. oil impreg. v.f. xln. to earthy dol. occurring as irregular, wavy, more or less horiz. lenses and interbeds. Scattered blobs dk. brwn. hvy. stn. dol.

2157.2 Interbed v.f. xln. lt. brwn. oil impreg. dol. and grnish-gray v.f. xln. earthy dol., occurring as irregularly bedded lenses and masses

o 2157.7 V.F. xln., lt. brwn. oil impreg. dol. and grnish-gray dol. mudst., irregular interbeds and low angle x-beds–50-50

o 2158.2 a/a

● 2158.7 Lt.-med. brwn oil impreg. f. xln. dol. and grnish-gray v.f. xln-earthy dol, interbedded as lenses and irregular masses, low-angle irregular x-bed 60% oil impreg.

o 2159.2 Dull grnish-gry mudst. w/v.f. xln. lt. brwn. oil impreg. dol. occurring as thin beds and lenses even to sl. irregular bedding, 20% mudst. w/ addt. dissem, pyrite

o 2159.7 a/a

o 2160.2 Intbed. v.f. xln., brwn., oil impreg. dol. and grnish-gray dol. mudstone, v. thin beds (1/16" - 1/4"), even varve-like, 50-50

● 2160.7 a/a, except occurring as irregularly-bedded

● 2161.3 a/a, lenses and interfingering masses, horizontally elongate

● 2162.2 Interbed grnish-gray dol. mudst., v. pyritic, and f. xln. brown to dk brown irregular beds and lenses dol., stn. heavier, darker

● 2162.7 F. xln., brwn. oil impreg. dol. w/thin irregular beds and lenses hvly. stnd. dk. brwn. dol.

● 2163.3 a/a

● 2163.7 a/a

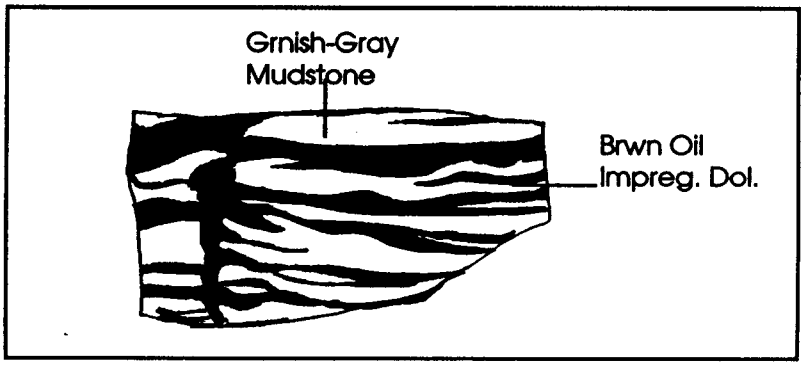
● 2164.2 a/a, heavy stn. inc. to 20%

o 2164.7 a/a

2165.2 o About 70% dull grnish-gry dol. mudst. w/30% med. to hvly stn. sl. calc. dol. occurring in irregular laminae and birdseye struct., very pyritic

● 2165.7 a/a, except 60% oil impreg. dol. and 30 dol. mudstone

o 2166.2 Thin intbeds and interlaminae of grnish-gray. dol. mudstone and f. xln. brwn. oil impreg. dol., probably somewhat anhydritic. Vein of oil impreg. dol. also cuts vertically across laminae--if reflecting mud crack, which it appears to be, then extending across beds and laminae prob. indicates algal mtl. present at deposition. V. pyritic, in both mudstone and dol. facies. Occurs as variable-sized cubes and irregular non-crystallized fragments, also as lath-like structure (old roots?). About 50-50 oil impreg. dol. and mudst.



o 2166.7 a/a

o 2167.3 V. thin even intbeds and laminae grnish-gray. dol mudst. and brwn. oil impreg. dol., about 50-50

2167.3 Grnish-gray dol., pyritic mudstone w/v. thin beds and laminae oil impreg. v.f. xln. oil impreg. brwn dol., 10-15%. One quasi-vertical crack in mudst. filled w/oil impreg. dol., 1/4" - 3/8"

2168.4 Grnish-gray dol. pyritic mudstone, cracked and dessicated and filled in vert. and quasi-horizontally w/oil impreg. micro xln. dol. Groups of crse. pyrite xls., irregular to imperfectly formed cubes and pyritohedrons, also unident blk. mul. grans, sometimes appears transitional w/pyrite

2168.9 a/a

2169.5 Irregular interbedded lenses and laminae (1/32" to 3/8") grnish-gray dol. mudst. and oil impreg. v.f. xln. dol., 50-50

2170.1 Blocky, dol., grnish-gray mudst. w/ abdt. v.f. pyrite and occurring thin laminae brown oil impreg. dol.

2170.9 Grnish-gray dol. mudst., brks. w/ conchoidal fract. and v. pyritic. Contains prob. old mud crack veins brwn. oil impreg. micro xln. dol. and has well developed "step" slickensides coated with dk brwn-blk. oil. Slicksurf 1/2" to 1" @ 50° to 60° from vert. then "step" over a low uneven angle to another steep slickensided surf.

o 2171.5 Thinly interbedded and interlaminar dull grnish-gry. mudstone and brwn oil impreg. micro xln. dol., dol. also occurs quasi-vertically crossing beds, apparent crack filling, v. pyritic, about 30% dol.

● 2172.1 Thinly interlaminated grnish-gray dol. mudst. and oil impreg. brwn. micro xln. dol. 50-50, laminae thin and swell in irregular fashion.

● 2172.9 V.f. xln. dense, hd. oil impreg. ls., no bedding

● 2173.4 Lt. brown to lt. gray mixture v.f. xln., dense ls., lt. brwn apparently from oil stns

● 2173.9 V. thinly intbed and interlam. dull grnish-gry calc., dol. mudstone and micro xln. oil impreg. calc. dol. 50-50. Beds and laminae both horiz. and micro x-bedded. Pyritic, some mudstone laminae nearly 50% pyrite

2174.5 Dull grayish-grn. dol. mudstone, conchoidal fract., v. pyritic, v. fine dissem. irreg. pieces and partially formed xls., abdt. blk mnl., under hi power (25x) appears to freq. occur transitional w/pyrite. Possibly magnetite (intermediate between hematite and pyrite). Indicate S not quite plentiful enough to make pyrite.

2175.1 a/a

2175.9 Inter low angle x-laminated grnish-gray dol. mudstone and earthy v.f. xln. dol. (probably a Dunham packstone) v. pyritic, but xls better formed, areas of coarser slx., and blk. mnls. less frequent.

2176.5 Blocky grnish-gray dol. mudstone w/conchoidal fract. abt. finely disseminated pyrite cubes, pyrite also as tabular micro-crack or fract. fillings.

2177.1 a/a except dec. pyrite

2177.8 a/a, more pyrite again as in 2176.5

o 2178.3 Inter v.low-angle x-laminated lt. gray micro-xln ls. and brown oil impreg. micro xln. calc. dol. 1/16" - 1/4" laminae

● 2178.9 Brwn. oil impreg. f. xln. ls. tight

● 2179.4 a/a

● 2180.1 a/a, except areas of v. dk. brwn. stn. and changing to a sucrosic calc. dol.

● 2180.9 a/a, change to dol.

● 2181.5 Brwn.-dk brwn., oil impreg. f. xln. to sucrosic dol., thinly interlamin. and low-angle x-laminae

● 2182.1 a/a

● 2182.8 a/a

● 2183.5 Brwn. oil impreg. f. xln dol. and gray earthy dol., thinly inter-x-laminated

● 2184.1 Brwn.-dk brwn. oil impreg. dol. w/small rounded to eliptical areas (1/16" - 1/8") of gry unstained f. xln. dol., widely dess. f. pyrite xls.

● 2184.9 Inter-micro x-lam. brwn. oil impreg. f. xln. del. and grnish-gray dol. mudst. and abdt. dissem. pyrite as tiny fully or partially formed cubes, 70% dol.

o 2185.5 Dull grnish-gry dol. mudst. 70%, w/30% oil impreg. brwn. dol. occurring as low angle x-laminae and filling in apparent mud cracks

● 2186.1 Brwn--dk. brwn. oil impreg. f. xln. dol., tight

● 2186.7 a/a

● 2187.4 Dol. a/a, calc.

● 2188.5 Brwn-dk. brwn oil impreg. f. xln. ls., tight

● 2189.1 Consistently a featureless, brwn.-dk. brwn.

● 2189.9, ● 2190.4 Oil impreg. f. xln. sucrosic carb., grading back and forth between a calc. dol. and dol ls.

● 2190.9 a/a

● 2191.5 a/a

● 2192.1 a/a

● 2192.9 a/a

● 2193.5 Dk. brwn., oil impreg. med. xln. sucrosic dol., fair por.

● 2194.1 Dk. brwn., oil impreg f. xln dol., tight

● 2194.8 a/a

● 2195.5 a/a, grading to a dol. ls.

● 2196.2 Dol. a/a

● 2196.9 a/a

● 2197.5 Dk. brwn., oil impreg. f-med xln. sucrosic dol., poor to fair por.

● 2198.1 a/a

● 2199.5 a/a

- 2200.1 a/a
- 2200.9 a/a
- 2201.5 a/a
- 2202.1 a/a
- 2202.8 Dol. a/a, dk. brwn. to blk.
- 2203.3 a/a
- 2203.9 a/a
- 2204.5 a/a
- 2205.1 a/a
- 2205.8 a/a
- 2206.2 a/a
- 2206.8 Brwn., oil impreg. f. xln. dol.
- 2207.2 Blk. med-crse xln. oil impreg. sucrosic dol., bldg. blk. oil, fair por.
- 2207.7 a/a
- 2208.3 Brwn. to blk. f-med xln. oil impreg. calc. dol., poor-fair por.
- 2208.8 a/a
- 2209.3 a/a
- 2209.7 a/a
- o 2210.2 Gryish brwn. oil impreg. f. xln. ls.
- 2210.7 Brwn. oil impreg. f. xln. dol.
- 2211.2 Lt. brwn–brwn, oil impreg. f. xln. ls.
- 2211.7 Ranging from dol. ls. to calc. dol.
- 2212.1 Dk. brwn., oil impreg. f. xln. dol., poor-fair por.

- 2212.7 a/a
- 2213.2 a/a
- 2213.7 a/a
- 2214.4 Dk. brwn., oil impreg. f. xln. calc. dol., tight
- 2214.8 a/a
- 2215.2 Dol. a/a
- 2215.7 a/a
- 2216.2 Dk. brwn., oil impreg. micro xln dol. ls. tight
- o 2216.6 Thin interbed. micro xln. brwn. oil impreg. calc. dol. and grnish-gry. earthy, arg. ls.
- 2217.2 Dk. brwn. oil impreg. f. xln. sucrosic dol., poor-fair por.
- 2217.6 a/a
- 2218.2 Dk. brwn. to blk. dol. a/a
- 2218.7 a/a
- 2219.2 a/a
- 2219.7 Brwn.-dk. brwn. oil impreg. f. xln. calc. dol., poor por.
- 2220.2 a/a
- 2220.7 Dk. brwn., oil impreg. f. xln. dol., poor por.
- 2221.3 a/a
- 2221.9 a/a
- 2222.5 a/a
- 2223.4 a/a
- 2223.9 a/a

●	2224.4	a/a
●	2224.9	a/a
●	2225.5	a/a
●	2226.3	a/a
●	2226.9	a/a
o	2227.7	Grayish-green dol. mudstone w/oil impreg. dol. as lenses and in chicken-wire struct. des. pyrite
o	2228.4	Grayish-green to lt. brwn., med. xln., earthy dol., tight
o	2228.9	Thin interbed., bands grnish-gry to lt. brwn. dol. a/a
o	2229.5	Thin interbeds and laminae grnish-gry xln. earthy dol. and f. xln., brwn. oil impreg. dol., low angle x-beds
	2230.2	Grayish-green dol. mudstone, conchoidal fract., abdt. finely diss. pyrite
●	2230.9	Brwn. oil impreg. v.f. xln. dol., poor por

LESHER
ENGINEERING

PETROLEUM
CONSULTING

10390 W. 34th Avenue
Wheat Ridge, Colorado 80033
(303) 238-5622

July 21, 1992

Bureau of Land Management
150 East 900 North
Richfield, Utah 84071

Dear Sir:

Enclosed is Form 3160-5 in triplicate requesting final inspection of Sorrel Butte #33-1 in Sec. 33, T29S, R12E. The well was drilled by Nova Natural Resources Corp.

If additional information is required, please advise.

Thanks,

Carl L. Lesher

CC: NOVA

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Nova Natural Resources Corp.

3. Address and Telephone No.
P.O. Box 17428, Denver, CO 80217

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
43-055-30039
580' FSL & 680" FEL Sec. 33, T29S, R12E

5. Lease Designation and Serial No.
USA Utah 56548

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA, Agreement Designation
N/A

8. Well Name and No.
Sorrel Butte

9. API Well No.
#33-1

10. Field and Pool, or Exploratory Area
Wildcat

11. County or Parish, State
Wayne, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☒ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The well has been Plugged and Abandoned. The surface has been restored and re-seeded. Please do a final inspection for drilling bond release.

RECEIVED
JUL 23 1992
DIVISION OF
OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Carl R. Rusten Title Consultant Date 7-21-92

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side